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ABSTRACT

Detailed information is provided about the Air Force Instructional System Development (ISD) Model to supplement the 1979 AECT presentation made in New Orleans. Information of interest to instructional systems designers includes (1) a short overview of the Air Force ISD model, (2) an extended example which demonstrates the Air Training Command Technical Training documentation required for entire "career fields" (in which one task is carried from Job Task Inventory through all steps of ISD and ending with an Evaluation Report), and (3) descriptions of an ISD managers course, ISD Technician Course, and Mediated Materials Development Course. Examples of documentation, a course evaluation, and a brief discussion of future trends are included. (Author/JEG)

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ED174198

AIR FORCE TRAINING

FOR

INSTRUCTIONAL SYSTEMS DEVELOPMENT

A PRESENTATION

ASSOCIATION FOR EDUCATIONAL COMMUNICATIONS AND TECHNOLOGY

1979 CONVENTION

MARCH 5-9, NEW ORLEANS

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Ronald R. Calkins

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) AND USERS OF THE ERIC SYSTEM."

by

RONALD R. CALKINS

IR007444

THE PRESENTOR

Lieutenant Colonel Ronald R. Calkins is Chief of the Faculty Development Division at Sheppard Technical Training Center, Sheppard Air Force Base near Wichita Falls, Texas. Calkins has served 23 years in flying, teaching, and training management positions in Air Weather Service, the Air Force Institute of Technology, Tactical Electronic Reconnaissance Squadrons, and the Air Training Command. He holds B.S., M.A, M.A. and Ph.D degrees in education, mass communications, and higher education management from the University of New Mexico and Denver University. His organization is the single point manager for eight standardized teacher training courses conducted in the five large Technical Training Centers and 90 Field Training Detachments worldwide. His division is also single point manager for initial and continuation courses for the 75XX Officer Education and Training career field, 751X0 Airman Education Technician career field, 751X2 Airman Training Technician career field, and 751X3 Instructional Systems Development Technician career field. The division is prime center for teaching ISD process concept and products in support of curriculum developer training needs throughout the Air Force.

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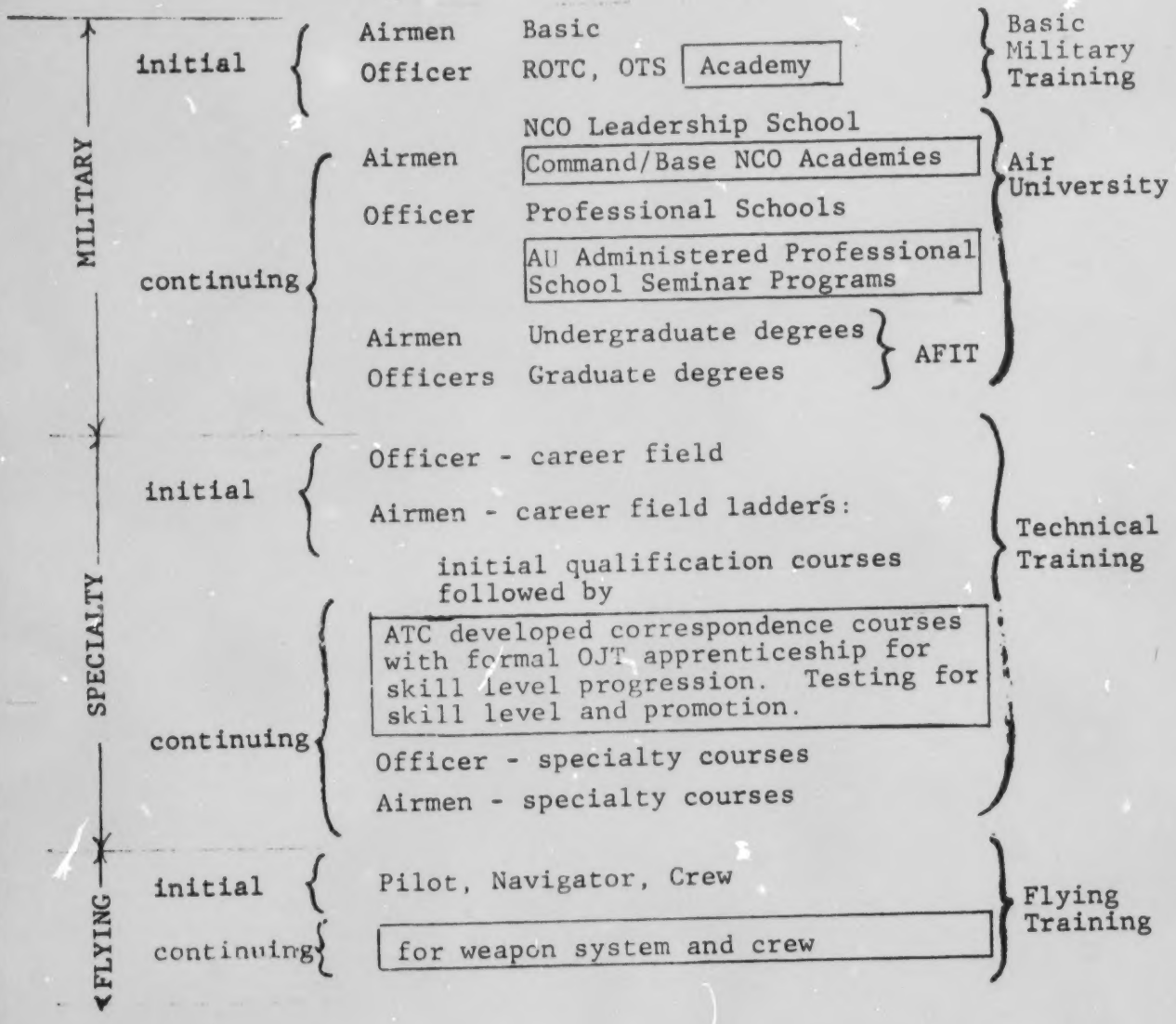
1. PERSPECTIVE

1.1. Overview of Air Force Training

The following two pages of figures were taken from the presentation slides to display a simplified classification schema of the Air Force training system. Although the terms used are not all technically correct and there are exceptions and inaccuracies, the classification schema does present a quick overview of the Air Force training system. The major ideas were that Air Force training can be concieved as military, specialty (career field) and flying. Within each of these major kinds of training we have formal programs for both initial and continuing education courses and each is further sub-divided for officers and airmen. The right hand margin indicates that Air Training Command is divided into several organizations. Air Training Command conducts all "initial" military, specialty and flying training. The "continuing" training is shared by all commands. Boxes show examples of "continuing" training. Much of the continuing training is conducted by the other commands and Air Training Command may or may not be deeply involved through support in course development, administration and training management functions. The most important concept is that certain formal Air Force training programs are written and conducted in all operational commands. Air Force policy is that "all" training programs be developed according to the ISD process concept. Each command may develop their own ISD products and corresponding management systems. My organization is tasked to train people from all commands about the development of curriculum according to the ISD process. We teach the use and construction of ISD products useful in any ISD effort. However, several of the commands conduct curriculum developer training courses taylor made to their unique needs, training management system and standardized ISD products. In section 1.2.2. (Product Examples) of this paper, you may review the standardized ISD products developed for the Technical Training portion of Air Training Command. These products are used for all of the initial and most of the continuing specialty training in all commands.

AIR TRAINING COMMAND



ALL OTHER COMMANDS

CONTINUING

Military - Specialty - Flying

*As indicated in boxes above

ALL OTHER COMMANDS

MILITARY	initial	Officer	Academy
	continuing	Airmen	Command and Base level NCO Academies
		Officers	Professional Schools Seminar Programs and Correspondence Courses through Base Education offices
		Airmen Officer	Undergraduate and graduate degrees through CCAF and participating universities administered by Base Education offices
SPECIALTY	continuing	Airman	Career Development courses (correspondence) with formal OJT and tests for skill progression. Administered by Base Personnel and Unit OJT Supervisor
		Officer	Correspondence courses (ECI) and applicable college courses administered by Base Education officer
FLYING	continuing	Airmen and Officers	Weapon system and crew training conducted and administered by the training units and schools in flying organizations

1.2. Air Force Version of ISD

1.2.1. Process Concept

TRAINING OBJECTIVES

The ultimate objective of a training program is to produce graduates capable of performing the jobs for which they are trained. Every training program is planned to train students to a predetermined level of competence in the shortest time possible and limited only by available facilities, equipment, and personnel. While in some cases the courses of instruction must include essential theoretical background information, for the most part instruction is aimed at classroom and job simulation techniques designed to bring the student to levels of competency required on the job. While established learning principles form the basis for the course of instruction, many innovations in training in such recently developed areas as audiovisual methods and simulators are included when deemed advisable. Basic decisions concerning training are made as a result of the total Instructional System Development (ISD) process.

INSTRUCTIONAL SYSTEM DEVELOPMENT

To ensure having the best training possible, the Air Force uses the procedures prescribed by AFM 50-2, Instructional System Development, to develop and revise courses. This process parallels the systems analysis approach in the development of a new System and provides for the systematic application of the principles of learning. ISD is an orderly, logical process of gathering and analyzing job performance requirements, preparing and conducting training, and evaluating and improving the effectiveness of the training program. Figure 3-1 shows the ISD process and its "closed loop" characteristics of interaction and feedback. This type of interaction improves the overall product of the procedure. For example, the relationship between job performance requirements and training objectives is so close that interaction is inevitable. Although the manner and degree of application differ for each individual situation, the underlying concepts of this procedure are constant. ISD is applied in the development of all new or revised instructional systems.

COMPONENTS OF THE ISD PROCESS

The following is a brief description of each step of the ISD process.

Step 1--Analyze System Requirements. Actions relating to instructional system planning and development are preceded by a thorough analysis of the requirements of the system, career area, or specialty to which its graduates will be assigned. Successful system analysis requires that all available sources of information be employed. In ATC Technical Training job analysis data are obtained through the Occupational Survey Program. This program provides the procedure for collecting, analyzing, and reporting information concerning the duties and tasks airmen perform in a specific specialty. Job analysis data are separated in terms of percent of personnel performing the job tasks, relative time spent, and task difficulty. Information of this type is especially useful in determining job performance requirements and identifying the tasks for which training is required. Specific system job performance requirements are

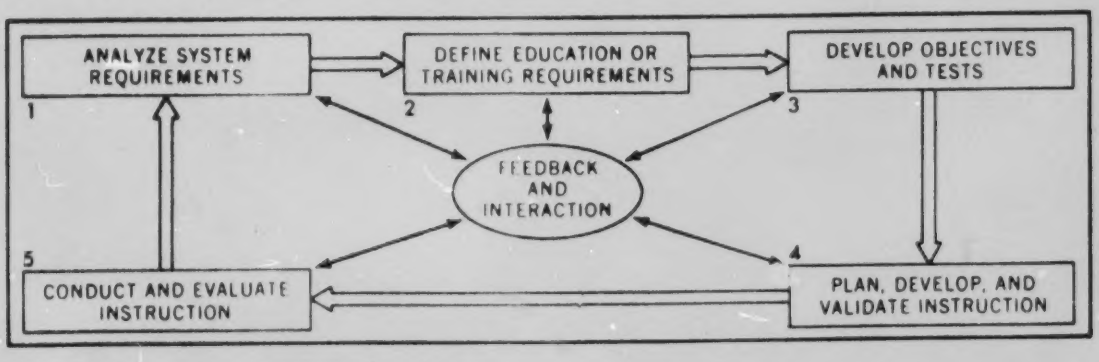


Figure 3-1. Instructional System Development Process

developed as system technical data during the system acquisition process. Analysis of these system-specific data provide the job performance information needed to develop or revise an instructional system. Instruction is effective only to the extent that is qualifies personnel for job performance. Therefore, an inventory of the duties and tasks to be performed by the human component of the system is the basis for ISD. Thorough analysis of system requirements ensures that instructional systems are in the context of operational or educational needs.

Step 2 Define Education or Training Requirements. The definition of education or training requirements is the first major decision-making step in ISD. Based on an analysis of job performance requirements and preliminary objectives, instructional standards are developed. These standards specify the behaviors (knowledge, skills, and attitudes) and the degree or level of proficiency needed for successful job performance. Determination is also made concerning cost-effective methods for acquiring qualified personnel. A decision to employ a formal course of instruction usually necessitates the preliminary identification of resource requirements. These resources include the major items of equipment peculiar or unique to that system, the facilities to be constructed or modified, and the personnel needed to develop and place the instructional system into operation. Since each of these resources represents costs, financial needs must also be identified and funds budgeted for these requirements.

Step 3 Develop Objectives and Tests. Criterion objectives represent the specific goals of instruction in terms of behavioral end-products based on job requirements, but placed into an instructional environment. Teaching steps establish subgoals of instruction for the intermediate skills and knowledge necessary to satisfy the requirements of the criterion objectives. Collectively, objectives can be considered the most important product of this step in the model. However, in and of themselves, objectives have little significance if tests are not developed which will precisely measure the behaviors specified by the objectives, as well as validate the success of the instructional system. These are the functions of performance and measurement tests. When practical, survey tests are prepared to evaluate the essentiality of objectives with respect to the background of the prospective students. Once these activities have been accomplished, the system designer can proceed to plan, develop, and validate instruction.

Step 4 Plan, Develop, and Validate Instruction. Execution of this step in the model requires the careful planning, developing, and validating of instruction to ensure that the objectives of a course can be effectively and efficiently fulfilled. Accomplishment of this involves the sequencing of teaching-learning activities to produce the best possible learning environment. Planning also includes the selection of cost effective instructional methodology, equipment, and aids to support these activities. Programming of equipment, facilities, manpower, and funds is then finalized so that resources are available when required. Course materials are prepared and, finally, all elements of the instructional system are tested and revised until their effectiveness in the learning process is validated.

Step 5 – Conduct and Evaluate Instruction. After the instructional system has been developed and validated, it is ready to be implemented. Planning is necessary to ensure that instructor and supervisory personnel are adequately prepared to conduct and administer the instructional program and that supplies and equipment will be available when needed. Not only must care be taken to ensure the necessary resources and trained personnel are available prior to implementing instruction, management must ensure that the system is properly maintained during operation. This includes further training of personnel, if necessary, maintenance of equipment and the proper level of supplies, and the updating of materials. Another important aspect of course operation is student qualifications. By establishing minimum acceptable aptitude levels (as measured by the Airman Qualifying Examination) and ensuring that students meet these minimums, instructional systems can be designed for the known target population. Also, the effective administration of students during course operation is of paramount importance.

Of course the ISD process does not end when the instructional program becomes operational. It must be continually evaluated to be sure that it produces qualified graduates in the most cost-effective manner. This is done by performing both internal and field evaluations.

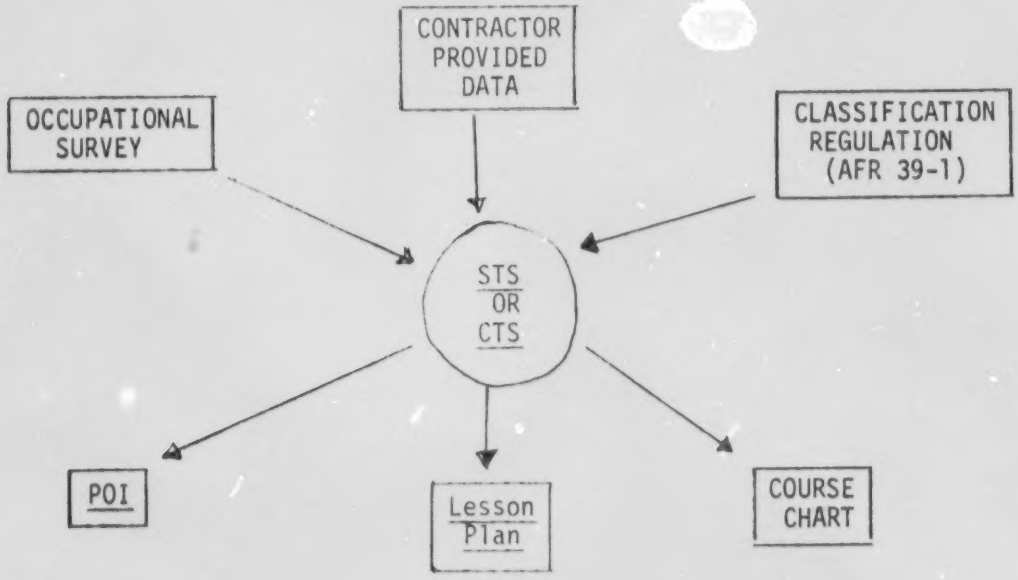
The evidence collected during internal and field evaluation is examined during this step to determine if the graduate is, in fact, capable of satisfying job performance standards. This information becomes the feedback to the system personnel. The analysis of data obtained through internal and field evaluation points out both strengths and weaknesses in the program. Properly conducted evaluation ensures a steady flow of pertinent and timely information for use in maintaining the quality and cost-effectiveness of an instructional system.

1.2.2. Product Examples

The examples reflect Air Training Command, Technical Training products of ISD. Each major air command develop their own ways of managing and documenting the ISD process concept.

An instructional system is documented to control its quality. The documents also serve as media through which individuals unfamiliar with an instructional system may be informed of its composition. Some of the publications used in documenting an instructional system are charted below to show their derivations and relationships to each other and to other documents and materials.

ISD PRODUCTS
ATC Technical Training Examples



Training Standard. An STS is the document used in the standardization and quality control of airman training in an AFS. The STS for an AFS reflects the job requirements in terms of tasks, knowledge, and proficiency levels required at the semiskilled, skilled, and advanced levels. Information contained in an STS comes from the airman classification regulation (AFR 39-1). Occupational Surveys, and/or data provided by the contractor on training requirements for new

Systems. ATC develops an STS in coordination with all major commands using the AFS covered. A Course Training Standard (CTS) is an ATC document more limited in scope and use; it prescribes course requirements, in terms of knowledge and tasks in which instruction is given, and the desired proficiency levels. CTSs are developed for officer courses and airman courses for which there are no STSs.

Course Chart. A brief outline of instruction which shows the sequence of subject material to be covered is contained in a course chart. The course chart lists only the broad subject areas in a course, course length, security classification of the subject matter, major training equipment, instructional design, and effective date.

Plan of Instruction. The Plan of Instruction (POI) combines material from the training standard with that in the course chart. It expands these basic control documents and provides the added detail needed by the instructor to develop specific lessons. In the POI, the learning objectives, references, equipment and training aids, method, and sequence of presentation are listed by units or modules of instruction.

Lesson Plan. The lesson plan serves as a guide for teaching which includes a list of objectives, teaching steps, and other information needed by the instructor to ensure effective attainment of the objectives. There must be at least one lesson plan for each unit/module of instruction established by the POI. Part I of the lesson plan is a course control document; Part II contains the technical information and presentation tips needed by the instructor. Part III is developed by each individual instructor or is annotated for his or her individual use.

HANDOUT

J30ZR/J40ST7500-3-I-2-2

Technical Training

Development and Management of Instructional Systems

EXAMPLES OF DOCUMENTATION

December 1978

USAF TECHNICAL TRAINING SCHOOL
Faculty Development Division
Sheppard Air Force Base, Texas

Designed for ATC Course Use

DO NOT USE ON THE JOB

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INTRODUCTION

ISD is a deliberate and orderly process for planning and developing instructional programs which insures that personnel are taught the knowledge, skills, and attitudes essential for successful job performance. This includes a description and analysis of the tasks necessary for performing the job, criterion objectives and tests clearly stated before instruction begins, evaluation procedures to determine whether or not the objectives have been reached, and methods for revising the process based on empirical data.

This handout is provided to give typical examples of various documentation (STS, syllabus, specific task data, etc). Also included are useful course development and management tools used throughout the Air Force that reflect the ISD process.

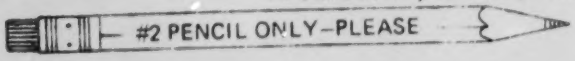
JOB TASK INVENTORY

The USAF Occupational Measurement Center surveys entire career fields, develops task lists and compiles data on the tasks airmen perform. This information is used by personnel and training managers.

On the opposite page is an extract from a Job Task Inventory for the 602X1, Freight Traffic Specialty. Task number 5 under Duty I, (Planning Freight Shipments) shows how task information is derived and documented early in the ISD process. This task will be the basis for the remaining examples of ISD documentation to show how training is determined/developed to support this training.

1. Check tasks you perform now (√).
2. On the back of the book, write in any unlisted tasks which you do now.
3. In the "Time Spent" column, rate all checked (√) tasks on time spent in present job.

AFSC 601X4, 602X0, 602X1



H. PACKING AND CRATING (CONTINUED)

	Check √ IF DONE NOW	TIME SPENT Present Job (1. Very small amount. 2. Much below average. 3. Below average. 4. Slightly below average. 5. About average. 6. Slightly above average. 7. Above average. 8. Much above average. 9. Very large amount.)
41. Remove protective coverings from military vehicles or hardware		
42. Repair or restore reusable containers		
43. Research military standards or technical publications for packing and crating specifications such as TPOs		
44. Secure crating materials or supplies		
45. Secure or maintain levels of bench stock materials or supplies		
46. Segregate consolidated shipments for distribution or trans-shipment		
47. Serve as packaging representative to commercial packers		
48. Service or operate foam-in-place equipment		
49. Sign in cargo for packing, crating, or shipment		
50. Uncrate freight		
51. Unpack boxes, crates, or containers and inspect contents		
52. Weigh freight or cargo		
53. Write packaging orders		
NOTE: If any task you perform under this duty is not listed, please specify on blank pages at end of booklet.		
I. PLANNING FREIGHT SHIPMENTS		
1. Assign or classify shipment compatibility or mode of transportation		
2. Assign handling, routing, or time requirements for shipment or arrival		
3. Assign special equipment handling requirements		
4. Consolidate freight shipments into single units		
5. Convert equipment and materials identities to freight nomenclature		

OCCUPATIONAL SURVEY DATA

The results of an Occupational Survey are contained in an Occupational Survey Report. Included on these data sheets are a list of duty/job descriptions and task/job descriptions for a specified career field.

Task I-5 on the data sheet (page 3-2) is a major task performed by airmen during the first 48 months on the job. Because of the amount of time spent performing this task and the number of airmen performing it, this task is highly considered for type 3 (resident) training.

ALL ANN 1-48 MOS AFMS IN GRP090 SPC071 PAGE 1

DUTY AND TASK PERFORMANCE DATA FOR SELECTED GROUP, BASED ON BACKGROUND INFORMATION LISTED BELOW, FROM THE 601X4/ 602X0/602X1 CAREER FIELD. TASKS ARE LISTED IN DESCENDING ORDER OF PERCENT TIME SPENT BY ALL GROUP MEMBERS.

TASK	JOB DESCRIPTION	CASES	TASKS	DUTIES	MBRS
		1814	446	17	241

D-TSK	DUTY/TASK TITLE	CUMULATIVE SUM OF AVERAGE PERCENT TIME SPENT BY ALL MEMBERS.....	AVERAGE PERCENT TIME SPENT BY ALL MEMBERS	AVERAGE PERCENT TIME SPENT BY MEMBERS PERFORMING....	PERCENT OF MEMBERS PERFORMING.....	TASK SEQ NO
I 8	DETERMINE NECESSITY FOR MOVEMENT OF FREIGHT	38.59	1.36	.53	62.32	
K 8	REVIEW SIZE, WEIGHT, OR DESTINATION OF SHIPMENT FOR ACCURACY	31.54	1.58	.50	62.82	60
E 20	MAINTAIN SHIPMENT PLANNING WORKSHEET FILES	34.44	1.43	.49	63.31	
F 23	PREPARE GOVERNMENT BILLS OF LADING (GBLS)	39.83	1.23	.49	63.80	
I 2	ASSIGN HANDLING, ROUTING, OR TIME REQUIREMENTS FOR SHIPMENT OR ARRIVAL	37.34	1.30	.49	64.28	
I 5	CONVERT EQUIPMENT AND MATERIALS IDENTITIES TO FREIGHT NOMENCLATURE	35.27	1.37	.48	64.77	
E 27	REPRODUCE MATERIALS USING COPY EQUIPMENT	38.17	1.25	.48	65.24	65
L 13	LOAD-PLAN SURFACE FREIGHT	34.85	1.33	.46	65.71	
I 11	DETERMINE SIZE AND TYPE OF MOTOR CARRIER EQUIPMENT NEEDED	39.42	1.16	.46	66.17	
J 9	REVIEW BILLS OF LADING	31.12	1.44	.45	66.61	
H 39	REMOVE BLOCKING OR BRACING	33.61	1.33	.45	67.06	
H 34	PALLETIZE CARGO	29.88	1.49	.44	67.50	70

SPECIALTY TRAINING STANDARD (STS)

The STS is an Air Force publication used to standardize and control the quality of individual training required to achieve the skills within an entire Air Force Specialty. These skills are based on job performance requirements of using activities and documented in terms of tasks, knowledges, and proficiency codes.

A sample page from a tentative STS is shown on page 4-2. The code levels used (proficiency code key scale values) are defined in a separate code key page (not shown).

TENTATIVE STS NUMBER 60231/51	PROFICIENCY LEVEL		
TASKS, KNOWLEDGES AND STUDY REFERENCES 1.	3 Lvl AFSC/Grs 2.	5 Lvl AFSC 3.	7 Lvl AFSC/Grs 4.
6a. Convert military equipment and material identities to freight nomenclature	2b	3c	
b. Identify and classify military equipment and material for transportation compatibility and mode	2b	3c	
c. Identify requirements (time, handling, and routing) of shipment	2b	3c	
d. Select mode of transportation that meets shipping requirements	2b	3c	
e. Use tariffs and regulations to determine means and method of transporting explosives and other hazardous items	2b	3c	
f. Determine weight of shipment being transported	2b	3c	
g. Determine authority for movement and apply appropriate transportation priority	2b	3c	
h. Identify special equipment needed for loading and unloading outsize cargo	1b	2b	
i. Arrange for special equipment needed for loading and unloading outsized cargo	1b	2b	See STS 60271
j. Movement of firearms	A	C	
k. Schedule placement of rail cars/motor vehicles for loading/unloading	b	2c	
l. Trace and expedite freight shipments	b	2c	
7. CONSOLIDATION OF SHIPMENTS			
SR: AFM 75-1, 75-2 (chap 211 and 214, sec VI); DODR 4500.32-R (chap 3); Carriers Classification and Rate Tariffs			
a. Consolidate small items or packages on the basis of:			
(1) Similar priorities	2b	3c	
(2) Delivery dates	2b	3c	
(3) Handling requirements	2b	3c	
(4) Transportation ratings	2b	3c	

SPECIALTY DESCRIPTION

AF Regulations 36-1 and 39-1 establish the occupational structure of the Air Force officer/airmen force. The degree of specialization required to accomplish essential Air Force technical and supervisory duties is depicted by the Air Force Specialty descriptions and occupational codes. This provides a systematic means for identifying training requirements and individual qualifications.

Attachment 32 on pages 5-2 and 5-3 shows a description of the AFSC 60251, Freight Traffic Specialist as found in AFR 39-1. The attachments found in AFR's 36-1 and 39-1 list the duties in the specialty. The duties are easily recognized since they are printed in italics.

A32-13
AFSC 60231
Semiskilled AFSC 60231
Helper AFSC 60211

AIRMAN AIR FORCE SPECIALTY

FREIGHT TRAFFIC SPECIALIST

1. SPECIALTY SUMMARY

Classifies and arranges for shipment of public property by military and commercial carriers.

2. DUTIES AND RESPONSIBILITIES

a. *Classifies property, determines carrier equipment requirements, and selects mode for property to be shipped:* Inspects materials to be shipped and translates military nomenclature to freight shipping descriptions in accordance with freight classifications directives. Determines approximate weights of commodities to be shipped and insures that shipments are consolidated in sufficient volume to move under volume rates specified in applicable freight classification. Routes freight shipments considering factors such as size and weight of shipment, compatibility of dangerous material, intransit handling, and comparative rates and facilities available from transportation companies. Develops and maintains an adequate data reference file. Prepares and keypunches automated movement documents and distributes in accordance with pertinent directives.

b. *Maintains shipment records and prepares correspondence and reports:* Records incoming and outgoing rail freight carloads in car record books and computes demurrage charges incurred. Maintains inbound and outbound shipment files and registers. Prepares bills of lading and railways express forwarding receipts. Prepares discrepancy-in-shipment reports. Maintains bills of lading registers and shipment files. Converts commercial documents to government bills of lading. Monitors and controls issue of accountable forms and seals. Monitors obligations authorities.

c. *Schedules, inspects, and expedites shipment of freight:* Determines priority of cargo and schedules movement accordingly. Inspects freight for compliance with packing and crating directives and oversea loading, insuring use of proper blocking and bracing. Inspects shipments unloaded to determine condition of material received. Coordinates with preservation and packaging personnel to initiate discrepancy reports on improperly packaged shipments. Reconsigns, traces, and expedites shipments.

d. *Coordinates transportation requirements:* Coordinates pickup and delivery of shipments of public property by commercial and military carriers. Schedules placement of carrier equipment within installation for loading and unloading. Gathers data for preparation of contracts for transportation services.

e. *Operates equipment:* Operates materials handling equipment such as forklifts, pallet trucks, and hand trucks.

f. *Supervises freight traffic personnel:* Assigns work to subordinates. Checks completed work for accuracy and evaluates individual performance. Instructs in freight traffic functions such as preparation of bills of lading, routing freight, classifying property, and maintaining shipment records. Develops training materials and aids, conducts formal training classes, and maintains training records.

3. SPECIALTY QUALIFICATIONS

a. *Knowledge.* Knowledge of freight classification and rates; procedures for preparing shipping documents and records; procedures for automated documentation; blocking and bracing principles; capacities and capabilities of commercial transportation facilities; and regulations and directives pertaining to shipment of freight is mandatory. Possession of mandatory knowledge will be determined according to AFR 35–1.

b. *Education.* Completion of high school with a course in typing is desirable.

★ c. *Experience.* Experience in functions such as classifying and routing freight; operating materials handling equipment; preparing bills of lading; maintaining shipment records; and inspecting freight for adequacy of packing, crating, blocking, and bracing is mandatory.

d. *Training.* Completion of a basic freight traffic course is desirable.

★ e. *Other:*

(1) Ability to operate a typewriter at a minimum rate of 20 words per minute is mandatory.

(2) Ability to operate keypunch equipment is desirable.

(3) A minimum aptitude level of Administrative 40 is mandatory.

(4) Possession of a valid SF 46, US Government Motor Vehicle Operator's Identification Card, is mandatory.

(5) Possession of a valid state driver's license or validated driving experience is mandatory.

★4. SPECIALTY DATA

a. *Grade Spread:*

E–3 through E–5 60251
E–3 60231

b. *Related D.O.T. Jobs:*

Shipping Clerk 222.387–050
Traffic-Rate Clerk 214.362–038

c. *Related DOD Occupational Subgroup:* 514

TASK/KNOWLEDGE ANALYSIS WORKSHEET

This device is used to document each task or subject knowledge statement to be included in instruction.

On pages 6-2 and 6-3 note how the task "Convert equipment and materials identities to freight nomenclature" is broken into its various task elements and supporting knowledges/skills. Other worksheets, such as TDW's, could also be used to analyze tasks. Design or use the worksheet which best suit your purpose.

TASK/KNOWLEDGE ANALYSIS WORKSHEET

Worksheet No: 5 IS No. and Date 60231/51 15 August 1978

Task or knowledge statement: Convert Equipment and Materials Identities to Freight Nomenclature

Statement Number: 6a Proficiency Code Level: 2b

Source Reference: NMFC Manuals

Analysts: James B. Goode

TASK ELEMENT	KNOWLEDGES/SKILLS
1. Locate materials to be shipped in the "Index to Articles."	1a. Location of "Index to Articles" 1b. Use of "Index to Articles"
2. Determine the item number of the materials being shipped.	2a. Location of item number 2b Purpose of item number
3. Locate the item number in the Articles Section.	3a. Location of Article Section 3b. Identification of item number
4. Determine the proper shipping group (if applicable)	4a. Identification of shipping group
5. Couple the proper group with the appropriate information for the item number found.	5a. Description or type of containers
6. Determine the appropriate class (rating) of the shipment.	6a. Establishing weight requirements (NMFC) 6b. Determining full or partial truck shipment (NMFC) 6c. Verifying shipping cost per 100 lbs (NMFC)
7. Determine the minimum truck load weight factor.	7a. Identification of minimum weight.

TASK/KNOWLEDGE ANALYSIS WORKSHEET

Worksheet No: 6 IS No. and Date: 60231/51 15 August 1978

Task or Knowledge Statement: Convert Equipment and Materials Identities to Freight Nomenclature

Statement Number: 6a Proficiency Code Level: 2b

Source Reference: UFC Manuals

Analysts: James B. Goode

TASK ELEMENTS	KNOWLEDGES/SKILLS
1. Locate materials to be shipped in the "Index to Articles."	1a. Identification of "Index to Articles" 1b. Use of "Index to Articles"
2. Determine the item number of the material being shipped.	2a. Location of item number 2b. Purpose of item number
3. Locate the item number in the Articles Section	3a. Location of Article Section 3b. Identification of item no.
4. Determine the proper shipping group (if applicable)	4a. Identification of shipping group
5. Couple the proper group with the appropriate information for the item number found	5a. Description of containers
6. Determine the appropriate class (rating) of the shipment	6a. Establishing weight requirements (UFC) 6b. Determining full or partial truck shipment (UFC) 6c. Verification of shipping cost per 100 lbs (UFC)
7. Determine the minimum truck load weight factor.	7a. Identification of minimum weight

LEARNING OBJECTIVE WORKSHEET

This is a useful device for developing criterion objectives. Documentation includes:

1. Statement of performance
2. The condition in which the task is performed
3. The standard or how well task will be performed

Pages 7-2 and 7-3 shows the documentation of two objectives that support Instructional Stardard Statement 6a. "Convert military equipment and material identities to freight nomenclature."

LEARNING OBJECTIVE WORKSHEET

WORKSHEET NO. 6a IS STATEMENT NO: 6a

PREPARATION BASED ON: Analysis Worksheet No. 5

PREPARED BY: SSgt John Renolds

a. Performance/Behavior(s)

List the freight descriptions

b. Condition(s)

Given National Motor Freight Classification, and list of freight shipments

c. Standard(s)

Proper description, applicable class ratings, and truckload minimum weight for each

d. Criterion Objective(s)

Given a National Motor Freight Classification (NMFC) and a list of freight shipments, list the proper freight description, applicable class ratings, and truckload minimum weight for each.

e. Subobjective(s)

1. Need for correct classification
2. Purpose of the NMFC
3. Plan of contents of the NMFC
4. Procedure for determining the exact classification
5. Rules of the NMFC

LEARNING OBJECTIVE WORKSHEET

WORKSHEET NO: 6b IS STATEMENT NO: 6a

PREPARATION BASED ON: Analysis Worksheet No. 6

PREPARED BY: SSgt John Renolds

a. Performance/Behavior(s)

List the freight descriptions

b. Condition(s)

Given a Uniform Freight Classification, and a list of freight shipments

c. Standard(s)

Proper description, applicable class ratings, and carload minimum weight for each

d. Criterion Objective(s)

Given a Uniform Freight Classification (UFC) and a list of freight shipments, list the proper freight description, applicable class ratings, and carload minimum weight for each.

e. Subobjective(s)

1. Need for correct classification
2. Purpose of UFC
3. Plan of contents of the UFC
4. Procedure for determining the exact classification
5. Rules of the UFC

COURSE CHART

The course chart is a product of ISD steps 2 through 5. It is based on the training standard and is the basis for subsequent development of the plan of instruction and lesson plans. The course chart identifies the course; states the training location, course length, security classification, instructional design, and target reading grade level for training literature; specifies major items of training equipment; and serves as a course outline.

Pages 8-2 and 8-3 shows a Course Chart for the Freight Traffic Specialist Course.

CORRECTED COPY

COURSE CHART

NUMBER	PDS CODE	DATE
3ABR60231	L44	7 May 1976

COURSE TITLE: Freight Traffic Specialist

SUPERSEDES COURSE CHART	DEPARTMENT OPR
20 August 1974	3780 TTG (Compt/Trnsp/Computer Tng)

APPLICABLE TRAINING STANDARD: 12 August 1974/C1 24 January 1975

ATC OPR AND APPROVAL DATE	CENTER OPR	COURSE SECURITY CLASSIFICATION
TTMS/ 9 October 1973	Sheppard /TTOXU	UNCLASSIFIED
INSTRUCTIONAL DESIGN	**LOCATION OF TRAINING**	**TARGET READING GRADE LEVEL**
Group/Lock Step	Sheppard AFB TX	8.5

COURSE LENGTH (40 ACADEMIC DAYS)

	Hours	
Technical Training		290
Classroom/Laboratory (C/L)	240	
*Complementary Technical Training (CTT)	50	
Related Training		30
Standard Traffic Safety, Course VI (AFR 50-24)	10	
Local Conditions Course, Course VII (AFR 50-24)	2	
Mission Application Seminar	6	
Commander's Calls/Briefings	2	
*End of Course Appointments; Predeparture Safety Briefing (ATCM 127-1)	10	
TOTAL		320

*Students proficiency advancing through Block V will receive end of course briefings in Block IV

REMARKS

Students demonstrating typing proficiency of 20 net words per minute (NWPM) by the 13th day will be graduated at the end of BLOCK IV (6 weeks) via proficiency advancement and will receive 320 hrs credit. Students not demonstrating 20 NWPM typing proficiency remain in training through BLOCK V (8 weeks).
Effective Date: 27 August 1976 effective with class 760827.

TABLE I - MAJOR ITEMS OF EQUIPMENT

Training Equipment: Truck, Lift, Fork, Electric Motor Powered 4,000 lb cap; Truck, Lift, Fork, Gasoline Engine Powered 4,000 lb cap; Battery Charger; Typewriter, Manual.

3ABR60231	COURSE CHART – TABLE II – TRAINING CONTENT	

NOTE: Include time spent on technical training (TT) (classroom/laboratory (C/L) and complementary technical training (CTT)) and related training (RT). Exclude time spent on individual assistance (remedial instruction). A single entry of time shown for a unit is C/L time. When a double entry is shown, the second entry is CTT time.

DAY OF TNG / HRS PER DAY	1 2 3 4 5 6	7 8
1 thru 5	Course Material - UNCLASSIFIED 30 Hours TT BLOCK I - Introduction to Transportation Orientation (3 hrs); Transportation Career Field (4 hrs); Typing Skill Development Test (1 hr); Publications (9 hrs); Carrier's Equipment and Operation (6.5 hrs); Communication Security (2.5 hrs); Safety (2 hrs); Measurement Test and Test Critique (2 hrs). 30 Hrs C/L	10 Hours RT
6 thru 10	Course Material - UNCLASSIFIED 32 Hours TT BLOCK II - Shipment Planning Freight Classification Publications (10 hrs); Military Standard and Movement Procedures (MILSTAMP) (18 hrs); Measurement Test and Test Critique (2 hrs). 30 Hours C/L	8 Hours RT 2 Hours CTT
11 thru 20	Course Material - UNCLASSIFIED 78 Hours TT BLOCK III - Shipping and Receiving Procedures Consolidation of Shipments (4 hrs); Routing of Freight Shipments (13 hrs); Typing Skill Development Test (1 hr); Commercial Freight Rate Publications (10 hrs); Measurement Test and Test Critique (2 hrs); Bills of Lading (8 hrs); Cargo Acceptance (6 hrs); Over, Short and Damage Reports (14 hrs); Measurement T... Test Critique (2 hrs).	18 Ho...
21	Course Material - UNCLASSIF... BLOCK IV - Fr... Trans... (27 ...	

PLAN OF INSTRUCTION/SYLLABUS
STEP 4

A Plan of Instruction (POI) is a qualitative course control document used for internal course planning, organization, and operation. The POI combines material from the training standard with that in the course chart.

Pages 9-2 and 9-3 shows a POI unit from the Freight Traffic Specialist course. This POI satisfies the training requirement on the task "convert equipment and materials identities to freight nomenclature" which is Item 6a on the Instructional Standard on page 4-2

PLAN OF INSTRUCTION/LESSON PLAN PART I		
NAME OF INSTRUCTOR	COURSE TITLE: Freight Traffic Specialist	
BLOCK NUMBER: II	BLOCK TITLE: Shipment Planning	
1 COURSE CONTENT		2 TIME

1. Freight Classification Publications — 10

a. Given a National Motor Freight Classification (NMFC) and a list of freight shipments, list the proper freight description, applicable class ratings, and truckload minimum weight for each. STS: 6a Meas: W, PT — (5)

(1) Need for correct classification

(2) Purpose of NMPC

(3) Plan of contents of the NMPC

(4) Procedures for determining exact classification

(5) Rules of the NMFC

b. Given a Uniform Freight Classification (UFC) and a list of freight shipments, list the proper freight description, applicable class ratings, and carload minimum weight for each. STS: 6a Meas: W, PT — (5)

(1) Need for correct classification

(2) Purpose of the UFC

(3) Plan of contents of the UFC

(4) Procedures for determining exact classifications

(5) Rules of the UFC

SUPERVISOR APPROVAL OF LESSON PLAN (PART II)	
SIGNATURE AND DATE	SIGNATURE AND DATE

PLAN OF INSTRUCTION NUMBER	DATE	PAGE NO.
J3ABR60231 000	30 July 1976	13

SUPPORT MATERIALS AND GUIDANCE

Student Instructional Materials

SG 3ABR60231-I-1, Freight Classification Publications
WB 3ABR60231-I-1, Freight Classification Publications
National Motor Freight Classification (NMFC)
Uniform Freight Classification (UFC)

Training Methods

Discussion and Demonstration (5 hrs)
Performance (5 hrs)

Instructional Guidance

Begin the lesson with a brief history of the development of classification of property. Explain classification terminology. Stress the necessity for proper classification of items to be shipped. Discuss the contents of the NMFC. Insure that students understand the use of the rules in the classification of freight. Introduce and discuss the UFC and compare it to the NMFC. Have students complete the problems in the workbook. Use the following publications to augment those listed under Instructional Materials when preparing the lesson presentation: AFM 75-1, Transportation of Material; and AFM 75-2, Military Traffic Management Regulation. Outside study assignment: Read SG 3ABR60231-I-1, Freight Classifications Publications.

LESSON PLAN

Lesson plans serve as a guide for teaching. They contain a list of objectives, teaching steps, and other information needed by the instructor to ensure effective attainment of the objectives.

In the following lesson plan, two objectives were used to teach the task "convert equipment and materials identities to freight nomenclature."

PART II - TEACHING GUIDE
INTRODUCTION (MINS)

ATTENTION: How much will it cost to send your personal effects from your home to your new duty station? It is not as simple as it may seem to figure out the fidderent rates for the many items that are subject to be shipped.

MOTIVATION: As a Freight Traffic Specialist you will be required to quote freight rates. By having a working knowledge of freight classification procedures and publications, you can practice more efficient traffic management. You can get the best overall service at the lowest possible cost to the government.

OVERVILW: 1. Freight Classification Publications

a. Given a National Motor Freight Classification (NMFC) and a list of freight shipments, list the proper freight description, applicable class rating, and truckload minimum weight for each.

(1) Need for correct classification

(2) Purpose of NMFC

(3) Plan of contents of the NMFC

(4) Procedures for determining exact classification

(5) Rules of the NMFC

b. Given a Uniform Freight Classification (UFC) and a list of freight shipments, list the proper freight description, applicable class ratings, and carload minimum weight for each.

(1) Need for correct classification

(2) Purpose of the UFC

(3) Plan of Contents of the UFC

(4) Procedures for determining exact classifications

(5) Rules of the UFC

BODY (Mins)

PRESENTATION: (Mins)

1. Freight Classification Publications

a. Given a National Motor Freight Classification (NMFC) and a list of freight shipments, list the proper freight descriptions, applicable class ratings, and truckload minimum weight for each.

Have students secure copy of NMFC prior to start of lesson.

(1) Need for correct classification

(a) To divide thousands of articles into relative few classes having similar transportation requirements or characteristics.

EXPLAIN: Classification, group, class, and rating all mean the same thing.

(b) To insure that the proper rates are lawfully charged.

rate = dollars,
rating = class,
category, grouping, percent of rate applied.

(c) To make cost comparison computations.

(d) To establish the low cost mode of transportation.

(e) To prepare shipping documents with common verbage for military and civilian industry.

TRANSITION:

(2) Purpose of the NMFC

(a) A tariff containing approximately 10,000 commodity descriptions of a singular or generic nature under which all commodities move in DOMESTIC MOTOR FREIGHT COMMERCE.

1 A tariff or tender is a book published by carriers.

Tariff does not mean TAX in our job.

2 Items of a singular nature are individual commodities which are not grouped.

3 Generic items are classed under a single grouping

Use page 234 for INDEX to generic headings and give

brief explanation, i.e., GAGS under is listed several different types of bags.

Further explanation during procedures segment.

(b) Prescribes nature of acceptable outer containers - each item when classified is given one or more specific type of acceptable shipping container. The carrier can refuse an improperly prepared package or charge increased rates.

(c) Contains rules which govern motor freight shipments. — We will discuss the rules later in more detail.

1 Makes shippers aware of common terminology.

2 Makes shippers aware of what the carriers are liable for.

3 Gives shippers guidelines to work within.

TRANSITION

(3) Plan of Contents of the NMFC — Begins bottom page 4.

(a) Participating carriers

1 Interstate (between states) — Page 5 thru 67

2 Instrastate (within a state) — Page 68 thru 130

(b) Index to Articles - Alphabetical listing of the articles contained herein designating the appropriate NMFC item number — Pages 134 thru 233

(c) Index to generic headings - alphabetical listing of the GROUPS that an item may be classified under. This section gives the Group item numbers. — Pages 234 thru 235

(d)	Index to Rules - An alphabetical listing of rules a shipper must comply with and the designated rule item number.	Page 237
(e)	Rules - numerically listed to designate the specific guidelines the shipper must comply with and the terminology used.	Pages 237 thru 296
(f)	Bills of Lading - shows copies of the different types of bills of lading which could be used by civilian shipping firms.	Pages 282 thru 296
(g)	Classification of articles	Pages 297 thru 675
	1 Numerical by item number	
	2 Alphabetical by Generic (group) headings	
	3 Shows the classification information along with the specific container(s)	
	4 Designates the Less-Than-Truckload (LTL) and Truckload (TL) classes	
	5 Establishes the minimum weight factor to be used for a truckload	Rule 997 which converts this column will be explained later.
(h)	Specifications for numbered packages - sequenced to give the details on package so numbered.	Pages 676 thru 815 Select package on page 676 and have student read the specifications.
(i)	Explanation of abbreviations and reference marks - explains the abbreviations and reference marks you may encounter while classifying an item.	NOI - not more specifically described herein KD - Knocked down SU - Set up

INTERIM SUMMARY

TRANSITION:

(4) Procedure for determining the exact classification

Start on pages 134, Stress alphabetically listed.

(a) Locate material to be shipped in the "INDEX to Articles"

EXAMPLE: CRUSHED BRICKS
1 - NOUN bricks
2 - Adjective crushed
ITEM #32130

(b) Determine the item number of the material being shipped.

(c) Locate the item number in the Articles Section

Starts page 297
item 32130 - page 348

(d) Determine the proper shipping group (if applicable)

If the information you are looki at is not to the extreme left of the articles column and next to the line look next items above yours (usually in BOLD PRINT) next to the line, this will be your Group.

(e) Couple the proper group with the appropriate information (description, container requirement, etc) for the item number found.

Place example on the board.

(f) Determine the apprppriate class (rating) of the shipment.

Located to the right of the articles section.

1 Less-than-truckload (LTL)

2 Truckload (TL)

(g) Determine the minimum Truckload weight factor.

Located in the last column to the right of the page. Use rule 997 (page 281) to ie: 20.2 = 20,000 pounds.

NOTE: Instructor should set several examples to allow student practice.

TRANSITION:

(5) ules of the NMFC

Have students use NMFC for the appropriate rules

(a) Item 110 - Definition and explanation of terms, punctuation and references.

1 Section 6(b) Truckload (TL) ratings and rates used on freight shipments paid at the TL minimum or actual if the weight greater.

Example: LTL 70 TL 35-30.2=30,000 in order to use the TL 35 rating you will pay for at least 30,000 pounds. Same as Rule 14.

2 Section 6(c) - Less than Truckload (LTL) ratings and rates used on shipments paid at weights less than the TL minimum weight.

In the above example, when using weights less than 30,000 pounds you would like to use the 70 rating. Same as Rule 16 of UFC.

(b) Item 595 - Maximum Charge

Example:

1 Section 1 - In no case shall the charge for any shipment from and to the same points, by the same route of movement be more than the charge for a greater quantity of the the same freight in the same freight shipping form and subject to the same packing rules at the rate and weight applicable to such greater quantity of freight.

A 1000 pound aircraft engine being shipped from Sheppard AFB, TX to Travis AFB, CA will not cost more to ship than a 2000 pound aircraft engine between the same two points.

2 Charges shall be the lowest that can be computed either by use of the applicable LTL class at actual weight or by the use of the TL caass at the TL Minimum Weight, (or actual weight shipped if TL minimum has been exceeded) provided for such class.

Example
ITEM Wt 8,000 pounds
Classed LTL TL NW
100 50 18.8 18,000
first class rate $1.00
LTL = 8,000 X 1.00 = $80.00ØØ
TL -18,000 X .50 = $90.00ØØ

NOTE: Further examples as necessary

3 The "Breakpoint" is the weight at which it cost the same to move a shipment either LTL or TL, to compute

a divide the TL rating by the LTL rating.

b multiply the percentage found times the minimum weight.

LTL TL MW
100 50 20.2 (20,000)
100 ÷ 50 = .50

.50 X 20,000 = 10,000 pounds

breakpoint is 10,000 pounds everything shipped weighing 10,000 pounds, or less, shall be shipped at LTL, everyting over should go as TL.
RULE 15 in UFC is the SAME

(c) Item 640 - Mixed Shipments LTL

EXAMPLE:

MIXED LTL PACKAGE

ITEM	LTL RATING
#1	100
#2	125
#3	80

1 Section 3(a) - If one package, pallet or platform has in/on it more than one article, charges will be based on the highest rated article in the package. The highest rated article will be shown on the bill of lading, along with the abbreviation "RS or L".

2 Section 2 - When LTL shipments packaged separately are subject to different classes, charges will be at the actual weight and class applicable to each shipment.

(d) Item 645 - Mixed Shipments TL or VOL

EXAMPLE:

ITEM	ACWT	LTL	TL	MW
1	7,000	150	150	20,000
2	8,000	100	100	25,000
3	6,000	80	40	15,000
4	12,000	70	35	30,000

1 Section 1 - More than one article for which the same or different TL rates, classes, or minimum weights are shown, which make up a TL freight shipment will be charged at the highest TL rate or class and the highest TL minimum weight that would be applicable to any article of freight in the shipment.

(e) Item 687 - Packaging or Packing noncompliance with

When the NMFC calls for a specific type container and a different type of container was used

1 Used when an article of freight has been found not meeting packing requirements shown in the NMFC. This rule is used only when this noncompliance is found after the goods have been accepted for transportation.

2 Section 3

a For LTL shipments the charge is 120 percent of the charge found by applying the highest LTL class rating for that article in that shipping form.

i.e. LTL cost of a shipment in noncompliance is $50, the penalty is found by taking 120% of $50 or $10.

50.00 Basic cost
x 1.20 percent
100000
5000
60.0000 new charge

b For TL classes the charge is 110 percent of the charge found by applying the highest TL class (rate) shown for that article in that shipping form.

60.00 basic cost
x 1.10 percent
60000
60000
66.0000 new charge

c The increase will apply to only that part of the shipment in noncompliance with the packing requirements.

If the shipment weight is 5000 pounds and 1000 in noncompliance, only the 1000 is subject to increased charges.

Same as Rule 5 UFC

(f) Item 995 - Weights - Gross weights and dunnage.

1 Unless otherwise provided, charges shall be made on actual gross weight, (Section 1)

2 Dunnage, any temporary blocking, flooring, or lining, racks, standards, strips, stakes or bracing not constuting a shipping carrier, container or package or part of the vehicle shall not be part of the gross weight (Section 2)

3 Dunnage for all but LTL or AQ class shipments must be furnished and installed by the shipper, except when the shipper requests the carrier to do so. If the carrier installs, he will:

a Buy the materials from a supplier he has no dealings with.

b Charge the shipper for installation of said dunnage at a rate of six dollars and seventy-five cents ($6.75) per hour or part thereof.

(g) Item 997 - Weights, Minimum Weight Factor. This chart is used to determine the TL minimum weight shown in the articles section.

i.e, 10.1 = 10,000
18.2 = 18,000
50.1 thru 60.2 = 50,000

APPLICATION:

(Mins)

Each student will complete Exercises I & II in workbook 3ABR60231-II-1. Instructions contained in the workbook must be followed exactly in order to successfully accomplish the problems. Exercise I will be completed as practice, exercise II will be utilized to measure student understanding of this objective.

Review instructions with students

EVALUATION:

(Mins

Students will be assisted as necessary during part 1 and 2 of exercise 1, they should correct all errors prior to proceeding to exercise II. No instructor assistance will be provided for exercise II and all responses must be correct to meet the objective.

TRANSITION:

(Mins)

Basically the same as the NMFC, except used only for rail.

PRESENTATION:

b. Given a Uniform Freight Classification (UFC) and a list of shipments list , the proper freight description, applicable class ratings, and carload minimum weight for each.

(1) Need for correct classification

(a) To divide thousands of articles into relatively few classes having similar transportation requirements or characteristics.

(b) To insure that the proper rate is lawfully charged.

(c) To make cost comparison computation.

(d) To establish the low cost mode.

(e) To prepare shipping documents.

(2) Purpose of the UFC

(a) A tariff containing approximately 10,000 commodity descriptions of a

singular or generic nature under which all commodities move in domestic rail freight commerce.

(b) Prescribes nature of acceptable outer containers.

(c) Contains rules which govern rail freight shipments

(3) Plan of contents of the UFC — NOTE: Inside of front cover, turn to each section & briefly explain.

(a)	Participating Rail Carriers	Page 9
(b)	Index to rules	Page 15
(c)	Index to articles	Page 19
(d)	Rules	Page 429
(e)	Articles	Page 517
(f)	Package description	Page 893
(g)	Explanation of Abbreviations	Page 1051

(4) Procedure for determining exact classifications — Same as with NMFC

(a) Locate the material to be shipped in the index to articles section

(b) Determine the Item Number of the material

(c) Locate the item number in the articles section.

(d) Determine the proper shipping group (if applicable) — Be sure to watch for subgroups

(e) Couple the proper group with the appropriate information, for the item number located

(f) Determine the appropriate class (rating) of the shipment

1 Less than Carload (LCL)

2 Carload (CL)

(g) Determine the carload minimum weight.

The "R" will be explained in the next area under Rules.

(5) Rules of the UFC .

The major portion were discussed and related when we talked about the rules of the NMFC.

(a) Rule 34, Minimum weights—— Used only when the CL minimum weight of the article you are classifying is suffixed (followed) by an "R" and:

1 A closed car (box, refer, cattle, etc) is ordered and used which exceeds 40'7" in length and/or has a cubic capacity that exceeds 4,150 cubic feet.

If smaller car needed rule 34 not used

2 Open car (flat, gondola, etc) ordered and used exceeds 41'6" in length

(b) Procedure for using

Example: Shipment weighing 19,000 pounds, in 42' boxcar, 4300 cubic

LCL	CL MIN	CL
100	20,000R	50

1 Turn to rule 34 in the UFC to the appropriate chart (closed or open cars)

2 Under the length of closed/ open car column find the correct line for the length and cubic capacity we have established in the example.

3 In the weight column find the CL minimum weight we have established in the example.

20,000R

4 Where the length/cube column and the weight column interest you will find the increased weight you will have to pay for when requiring this size car.

40'7", 4300 cubic car 20000R min will now require 25,000 lbs to be paid for.

Interim Summary:

TRANSITION:

APPLICATION: (Mins)

Each student will complete exercises III and IV beginning on page 16, WB 3ABR60231-II-1. Exercise III will be completed as practice and Exercise IV will be utilized to evaluate student understanding of this objective.

EVALUATION: (Mins)

Instructor may provide assistance and guidance for the completion of exercise III, upon completion students will correct errors prior to proceeding. Exercise IV will be accomplished without error or assistance.

TRANSITION:

CONCLUSION (mins)

SUMMARY: 1. FREIGHT CLASSIFICATION PUBLICATIONS

A. Given a National Motor Freight Classification (NMFC) and a list of freight shipments, list the proper freight description, applicable class rating, and truckload minimum weight for each.

(1) Need for correct classification

(2) Purpose of NMFC

(3) Plan of contents of the NMFC

(4) Procedures for determining exact classification

(5) Rules of the NMFC

b. Given a Uniform Freight Classification (UFC) and a list of freight shipments, list the proper freight description, applicable class rating, and carload minimum weights for each.

(1) Need for correct classification

(2) Purpose of the UFC

(3) Plan of Contents of the UFC

(4) Procedures for determining exact classifications

(5) Rules of the UFC

MOTIVATION: Since no one likes to put out more money than they should for services or some item they purchase, you can realize the importance of proper classification in relation to the military where millions of tons of cargo will begin movement within the commercial transportation system daily.

CLOSURE: The use of these commercial publications will be required throughout the remainder of the course and your tour in the service as a Freight Traffic Specialist; be sure that you are capable of correctly using them.

STUDENT STUDY GUIDE

This is a training publication(s) prepared for a unit or multiple units of instruction. The study-guide contains task and subject information relating to the objectives of the units of instruction. The following study guide, along with the workbook, supplements instructor presentations and enable the student to progress independently toward achieving the proficiency specified by the course objectives.

FREIGHT CLASSIFICATION PUBLICATIONS

OBJECTIVE

Using freight classification publications, find out the right freight description and class ratings when given a list of Air Force shipments.

INTRODUCTION

Freight classification has long been a subject which has been hard to understand by those who have come in contact with freight traffic management. This has been true for the main reason that there are so many factors which can affect classification. The first task, then, is to give a definition of classification and to tell why we need exact classification of freight.

Classification of freight means to split up thousands of pieces of freight, that you may ship, into just a few groups (classes). The basis for this split is the fact that the items have like transportation needs.

Classification is referred to by any one of a lot of different terms, but all mean just about the same thing. It is important that you know what these terms are, and that you keep them in mind throughout your studies. Classification, group, class, and rating all mean the same thing; the category or group into which like types of freight have been placed. These terms do not refer to the dollars-and-cents cost of transporting freight. The word "rate" as in "freight rate," is used when we are speaking of the cost of transportation. As a freight traffic specialist, you will ship all types of freight, so you must be able to find the right classification. This is so that the right rate may be lawfully charged. You will use the information that you find to: (1) make cost comparison computations, (2) choose the low cost mode, and (3) make out shipping documents.

INFORMATION

DEVELOPMENT OF CLASSIFICATION

When the regulation of transportation came to be, it caused the use of standard freight classifications. The first use of freight classification came to the United States from Europe. Over there, it had long been in use by canal and river boat men. First the water carriers used it, as did the wagoners in their time, and last, but not least, the railroads took up the use of it.

These first publications, though they were referred to as classifications, were no more than crude lists of prices. Now, a classification is a large book which splits up thousands of kinds of freight into just a few groups (classes). It does not show rates (the charge or cost) at all.

At the same time that freight classification was developing, parts of the country were being formed into classification territories. The physical, geographical, economic and transportation characteristics of particular parts of the country soon brought about three main territories: (1) the Official, (2) the Southern, and (3) the Western. A fourth, the Illinois Classification Territory, came about some time later. These divisions are shown on the map in figure 11.

Figure 11. Classification Territories

The needs of carriers and the demands of shippers for a uniform and more simple system led to the development of one classification. One classification was made for each of the three main territories.

The Consolidated Freight Classification

The Consolidated Freight Classification (CFC) is made up of parts containing the description of articles, rules, regulations, and packaging requirements. It was made up to apply to all three territories, but the ratings are not the same. In 1952, it gave way to the first Uniform Freight Classification (UFC). The CFC is on its way out of the classification picture. We will go over the UFC after we discuss the National Motor Freight Classification (NMFC), which is a lot like it.

The National Motor Freight Classification (NMFC)

The NMFC is a book (TARIFF) put out by the motor carriers. It is for the most part used to put a lot of items into a few classes (GROUPS). The NMFC has in it four main types of information: (1) an alphabetical list of the thousands of types of freight; (2) the rating for each type for both truckload (TL) and less-than-truckload (LTL) shipments; (3) an in depth description of the types of packages or shipping containers you must use for the freight shipments; (4) an in depth list of rules you must follow when you want to make a freight shipment.

NMFC RATINGS. There are, for the most part, 11,000 numbered types of freight, described and put into groups (CLASSES) in the NMFC. Plus, there are a lot of different ways in which a numbered piece of freight may be described. It is said by

experts that there are just about 30,000 different kinds of freight in this book. Yet all of these fall into one or the other of only 24 different groups.

In the NMFC, there are but 14 separate class ratings ranging downward from 100 to 30; and 10 ratings above 100, ranging from 110 to 500. A class rating of 85 means that the cost of transporting a piece of freight with that rating will be 85% of the first class rate, per hundred pounds.

		(1)	(2)
EXAMPLE:	First class rate of	$1.00	$5.50
	Class rating of	.85%	1.25%
		5.00	2750
		8.00	1100
	Rate per hundred pounds (CWT)	.85[illegible]	550
		[illegible]	[illegible] or $6.88 per CWT

If the last two positions are 50 or more, you add 1¢ to the position to the left. If the last two numbers are less than 50, drop them, and add nothing.

RULES OF FREIGHT CLASSIFICATION. These rules are used in both motor and rail freight movement, so we will cover the motor rules and give you the like rail rule number.

Item 110 - DEFINITION AND EXPLANATION OF TERMS, PUNCTUATION AND REFERENCES. Since your instructor will explain the bulk of the terms found under this rule in class, we will look at some of the more important ones.

Truckload (TL) ratings and rates will be used on freight shipments when the shipper pays for the TL minimum weight for that item of freight, or pays for the actual weight, whichever is greater. Rule 14 is a similar rule in the UFC.

Less than Truckload (LTL) ratings and rates will be used on shipments being paid for at weights less than the TL minimum weight. "LTL" ratings are higher than TL ratings. Rule 16 in the UFC is a similar rule.

Item 595 - MAXIMUM CHARGES

a. Section 1 - In no case shall the charge for any shipment from and to the same points, by the same route of movement be more than the charge for a greater quantity of the same freight in the same shipping form and subject to the same packing rules at the rate and weight applicable to such greater quantity of freight.

EXAMPLE: A 1,000 pound aircraft engine being shipped from Sheppard AFB, TX to Travis AFB, CA will not cost more to ship than a 2,000 pound aircraft engine shipped from and to the same points.

b. Charges shall be the lowest that can be computed either by use of the applicable LTL class at actual weight, or by use of the TL class at the TL minimum weight (or actual weight shipped if it is more) provided for such class.

EXAMPLE: (1) You are to ship 8,000 pounds of an item which has an LTL rating of 100, a TL rating of 50, and a truckload minimum weight of 18,000 pounds.
(2) $1.00 will be used as the first class rate for simplicity.
(3) The rate is found by multiplying the applicable class rating (LTL or TL) times the first class rate.
(4) To find the LTL cost, multiply the actual weight times the LTL rate. 8,000 (ACTUAL WT) X 1.00 (LTL RATE) = 40.00ØØ ($80.00)
(5) To find the TL cost, multiply the TL minimum weight times the TL rate. 18,000 (TL MN WT) X .50 (TL RATE) = 90.00ØØ ($90.00)
(6) In this case you would use the LTL rating, because it is the cheaper of the two.

c. Your instructor will cover this rule in more detail during class, and will also explain the idea of "BREAKPOINTS". A like rule is Rule 15 of the UFC.

Item 640 - MIXED SHIPMENTS -LTL
(1) If one package, pallet, or platform has in it more than one article, the charge will be based on the highest LTL rating of any piece in the package. Just the highest rated article would be shown on the bill of lading, and the notation "and other articles classed the same or lower", which may be abbreviated "RS or L".
(2) When LTL shipments, separately packaged, are subject to different LTL classes, each shipment will be charged for at the actual weight and rate applicable to each shipment.

The instructor will show you some examples of this rule during your classroom instruction. Basically, you must know if the freight is packaged all in the same container, or in separate containers, in order to charge the right rate.

Item 645 - MIXED SHIPMENTS - TL or VOL
a. Sec 1 - More than one article for which the same or different TL rates, classes or minimum weights are shown, which make up a TL freight shipment, will be charged at the highest straight TL rate or class and the highest TL minimum weight that would be applicable to any article of freight in the shipment. (See Figure 13)

EXAMPLE: You are to have the following mixed TL shipment:

ITEM #	ACT. WT	LTL	TL	TL MN WT
1	7,000	100	50	20,000
2	8,000	200	100	26,000
3	6,000	80	40	15,000
4	12,000	70	35	30,000
TOT:	33,000	@	100	

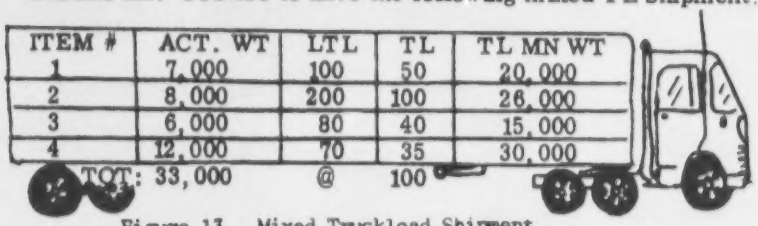


Figure 13. Mixed Truckload Shipment

You will pay for 33,000 pounds at the highest TL class rating of 100. If the actual weight were less than the highest TL minimum weight (30,000), you would have paid for at least that amount (30,000). A like rule is Rule 10 of the UFC.

Item 687 - PACKING OR PACKAGING - NONCOMPLIANCE WITH

a. This rule will be used when an article of freight has been found to be out of compliance with the packing requirements shown in the NMFC. The rule is used ONLY when this noncompliance is found after the goods have been accepted for transportation.

b. Sec 3 - (1) When LTL classes are used on the article shipped, the charge shall be 120% of the charge found by applying the highest LTL class shown in the NMFC for such freight in the same shipping form.

EXAMPLE: A 100 pound LTL shipment costing $20.00 to ship was found to be out of compliance with NMFC packaging requirements. The penalty will be computed as follows: $20.00 X 1.20 (120%)= $24.0000. $4.00 is the extra charge for noncompliance.

(2) When TL classes are used on the article shipped, the charge shall be 110% of the charge found by applying the highest TL class shown in the NMFC for such freight in the same shipping form.

EXAMPLE: A 10,000 pound shipment costing $300.00 to ship was found to be out of compliance with NMFC packaging requirements. The penalty will be computed as follows: $300.00 X 1.10 (110%)= 330.0000. $30.00 is the extra charge for noncompliance.

(3) The increased rates will be put only to that part of a shipment which does not come up to par with the packing requirements. A like rule is Rule 5 of the UFC.

Item 995 - WEIGHTS -GROSS WEIGHTS AND DUNNAGE

a. Sec 1 - Unless otherwise provided, charges shall be made on actual gross weights. (The weight of the item and its container equals GROSS WEIGHT).

b. Sec 2 - Dunnage -- any temporary blocking, flooring or lining, racks, standards, strips, stakes or similar bracing, or supports, not constituting a shipping carrier, container or package, or a part of the vehicle shall not be a part of the gross weight. Dunnage for all but LTL or AQ class shipments must be furnished and installed by the shipper, except when the shipper requests the carrier to do so. If this is done, the carrier will:

(1) buy the materials from a supplier he has no dealings with.

(2) charge the shipper for installing the carrier-furnished dunnage at a rate of six dollars and seventy-five cents ($6.75 per hour or faction of an hour) per man.

Item 997 - WEIGHTS -MINIMUM WEIGHT FACTORS
The minimum weight factor is used to determine the minimum weight of a truck-load shipment.

EXAMPLE: A minimum weight factor of 10.1 means that the TL minimum weight will be 10.000 pounds. 18.2 designates a TL minimum weight of 18,000 pounds.
The UFC does not have a rule like this.
The Uniform Freight Classification (UFC)

The tariff books of rail carriers are like those put out by the motor carriers. The UFC has in it ratings for rate making purposes as well as rules. Since the UFC is like the NMFC in content and use, in depth instructions will be gone over in class. One rule in the UFC needs to be gone over at this time. Rule 34-Minimum Carload Weights, This rule will be used only when you look up an item in the "Articles" section and find the carload minimum weight followed by the letter "R". You must also require one of the next two items:

Closed car (Boxcar, etc), ordered and used is more than 40'7" in length, and/or capacity exceeding 4150 cubic feet.
Open car (flatcar), ordered and used, is more than 41'6" in length.

EXAMPLE: (Your instructor will help you with this in class) You are to ship 19,000 pounds of an item (as a CARLOAD) from point "A" to point "B" in a 42' boxcar (closed) having a cubic capacity of 4300 cubic feet. When you look this freight up in the Articles section, you find this information:

LCL RATING	CARLOAD MINIMUM(POUNDS)	CARLOAD RATING
100	20,000R	50

After you get the above data, you will:

(1) turn to Rule 34 and find the chart that says "Length of Closed Car".
(2) under the "Length of Closed Car" column find the correct line for a 42' boxcar, with a cubic capacity of 4300 cubic feet.
(3) in the weight columns find the one headed "20,000 lbs Charge not less than".
(4) where the line in step (2) and the column in step (3) meet, find the increased weight you will have to pay for this "special" size car.

Though you are to ship only 19,000 pounds of this item as CL, you will have to pay for at least 25,000 pounds in order to use the cheaper CL rating.

QUESTIONS

Answer each of the following questions in the space provided below or on a separate sheet of paper.

1. What is the definition of freight classification?

2. What is the difference between rate and rating?

3. For what purposes will you use the classification information that you find?

4. In what publication will you find the carload rating for a particular shipment?

5. What relation is there between the first-class rate and a specific rating?

6. You have a first-class rate of $5.00, and a CL rating of 35. What will the rate per 100 pounds (CWT) be for transporting this shipment?

7. Explain truckload/carload minimum weight.

8. In a mixed TL shipment, charges will be assessed at the _____ TL rate or class and the _____ TL minimum weight for any article of freight in the shipment.

9. For a mixed LTL shipment, how will you determine the applicable rating to be used in figuring costs if the shipment is packaged in one box?

10. Explain, in your own words, NMFC Item 687.

11. What will the charge be for an incorrectly packed TL shipment discovered after acceptance by the carrier?

12. When will Rule 34 of the UFC be used?

13. In the Uniform Freight Classification, you will find information pertaining to what mode of transportation?

14. What is dunnage?

15. The shipper will furnish dunnage for all but what two type of shipments?

REFERENCES

NATIONAL MOTOR FREIGHT CLASSIFICATION (NMFC)

UNIFORM FREIGHT CLASSIFICATION (UFC)

STUDENT WORKBOOK

The workbook provides practical work to be accomplished, procedures, exercises, and problems. The study-guide and workbook may be published separately or as one publication identified as a study guide workbook.

FREIGHT CLASSIFICATION PUBLICATIONS

OBJECTIVES

Given a National Motor Freight Classification (NMFC) and a list of freight shipments, list the proper freight description, applicable class ratings, and truckload minimum weight for each.

Given a Uniform Freight Classification (UFC) and a list of freight shipments, list the proper freight description, applicable class ratings, and carload minimum weights for each.

Standard of Performance

Must correctly complete all responses on all performance tests.

EQUIPMENT

	Basis of Issue
National Motor Freight Classification	1/student
Uniform Freight Classification	1/student

PROCEDURE

Follow the procedures contained in each exercise.

EXERCISE I (PART 1)

Use the National Motor Freight Classification to list the proper freight description, applicable class ratings, and truckload minimum weight for each shipment listed in the problems. Problems 1 thru 4 will be completed as practice.

Step 1. Look up the item to be classified in the INDEX TO ARTICLES section of the NMFC in order to determine the ITEM NUMBER.

Step 2. Find the determined ITEM NUMBER in the ARTICLES section of the NMFC.

Step 3. If the information next to the item number is next to the margin line, copy that information along with the LTL and TL classes. If the information is not next to the margin line, look above for a GROUP (and possibly the subgroup) and copy the same information just mentioned.

Step 4. Turn to rule 997 and determine the MINIMUM WEIGHT in pounds that was represented by the minimum weight factor in the "MW" column of the Articles section.

LIST OF AIR FORCE SHIPMENTS	PROPER FREIGHT DESCRIPTION	CLASSES LTL	CLASSES TL	TL MINIMUM WEIGHT
PROBLEM 1. Bookkeeping Machine Parts				
NMFC ITEM NO. _____				
PROBLEM 2. Freight Loading Dunnage				
NMFC ITEM NO. _____				
PROBLEM 3. Iron Tent Stakes				
NMFC ITEM NO. _____				
PROBLEM 4. Body Warmers				
NMFC ITEM NO. _____				

STOP! DO NOT PROCEED UNTIL TOLD TO DO SO BY YOUR INSTRUCTOR.

EXERCISE I (PART 2)

Use the National Motor Freight Classification to complete the following problem for practice.

Step 1. Read the problem and classify the item using the NMFC.

Step 2. On a separate sheet of paper, copy the ratings and minimum weights.

Step 3. Determine the cheaper rating, between LTL and TL, using the formulas previously provided by your instructor. In the spaces provided, enter the costs that you find.

The Traffic Management Officer at Sheppard AFB, TX has 12,000 pounds of toolracks, iron, SU consigned to Luke AFB, AZ. The first class rate to be used is $1.00. Determine the rating that will produce the lowest overall cost to the government and place a check next to your choice.

LTL_____ TL_____

EXERCISE I (PART 3)

Use the NMFC to complete the following problem for practice.

Step 1. Analyze the problem and compute the transportation charge.

Step 2. Compute the penalty charge and place your answer in the space provided.

The Traffic Management Office sent a 22,000 shipment of Tear Gas Candles, packed in cardboard cartons, via Roadway Express on August 21. On August 22, Roadway informed you that the shipment was not packed in compliance with packaging regulations. If the first class rate for this item is $1.00 per hundred pounds, how much would the penalty be on this shipment? What NMFC rule governs packaging non-compliance?

Penalty Charge_____ NMFC Rule #_____

STOP!

DO NOT PROCEED UNTIL TOLD TO DO SO BY YOUR INSTRUCTOR.

EXERCISE II (PART 1)

PROCEDURE

The following six problems will be used as part of the performance test of this objective. They will be completed without error.

LIST OF AIR FORCE SHIPMENTS	PROPER FREIGHT DESCRIPTION	CLASSES LTL	TL	MW
PROBLEM 1. Bed Tiering Adapters				
NMFC ITEM NO. _____				
PROBLEM 2. Chewing Gum Base				
NMFC ITEM NO. _____				
PROBLEM 3. Prophylene Glycol				
NMFC ITEM NO. _____				
PROBLEM 4. Water Skiing Rope				
NMFC ITEM NO. _____				

LIST OF AIR FORCE SHIPMENTS	PROPER FREIGHT DESCRIPTION	CLASSES		
		LTL	TL	MW
PROBLEM 5. Steel Aircraft Landing Runways				
NMFC ITEM NO. ____				
PROBLEM 6. Horsehide Scraps				
NMFC ITEM NO. ____				

EXERCISE II (PART 2)

The following problem will be used to complete the performance test of this objective and will be answered correctly.

The Traffic Management Officer at Holloman AFB, NM has 13,000 pounds of missile propelling units, Class A, consigned to Minot AFB, ND. The first class rate to be used is $1.00. Determine the rating that will produce the lowest overall cost to the government. Place a check beside your choice in the space provided.

LTL_____ TL_____

EXERCISE II (PART 3)

The Traffic Management Office has the following mixed truckland shipment to make:

ITEM	ACTUAL WT	LTL CLASS	TL CLASS	MINIMUM WEIGHT
Carboys	7,000	100	70	12,000
Sewer Pipe	11,000	125	85	36,000
Door Guards	5,000	125	85	33,000
Batteries	10,000	100	70	30,000

1. What class rating would charges for the above shipment be based on?

_____.

2. What would the minimum weight be for this shipment?_____.

EXERCISE III

Use the Uniform Freight Classification to list the proper freight description, applicable class, and carload minimum weight ratings for each shipment listed in the problems. Problems 1 thru 6 will be performed as practice.

Step 1. Look up the item to be classified in the INDEX TO ARTICLES section of the UFC in order to determine the ITEM NUMBER.

Step 2. Find the determined ITEM NUMBER in the ARTICLES section of the UFC.

Step 3. If the information next to the item number is next to the margin line, copy that information along with the Less Carload Rating, the Carload Minimum (Pounds) and the Carload Rating. If the information is not next to the margin line, look above the information for a GROUP (and possibly the subgroup) and copy the same information just mentioned.

Step 4. For those problems where the carload minimum weight indicates that charges are to be based on Rule 34, you will:

a. Find the Carload Minimum Weight in the ARTICLES section of the UFC.

b. Turn to rule 34 to the appropriate chart for either open or closed railcars and find the appropriate information as given in the problem.

c. In the space provided in the workbook, enter your answer.

LIST OF AIR FORCE SHIPMENTS	PROPER FREIGHT DESCRIPTION	LESS CARLOAD RATINGS	CARLOAD MINIMUM POUNDS	CARLOAD RATINGS
PROBLEM 1. Barrage Balloons				
UFC ITEM NO. _____				
PROBLEM 2. Pallets, Concrete Block, Iron				
UFC ITEM NO. _____				
PROBLEM 3. Army Tank Tractor, Without Guns, Loose				
UFC ITEM NO. _____				
PROBLEM 4. Leather Stuffing Compounds				
UFC ITEM NO. _____				

PROBLEM 5

A shipment of 20,000 pounds of gun carriages or mounts, NOIBN loose is to be shipped from Travis AFB, CA to Pope AFB, NC. It is loaded on a 40' boxcar having a cubic capacity of 4,000 cubic feet. Carload charges will be based on weight of not less than _____ pounds.

PROBLEM 6

A shipment of jet aircraft engine starter cartridges, explosive, class A in boxes is to be shipped from Dover, AFB, DL to Loring AFB, ME. The shipment weighs 22,000 pounds and is to be loaded on a 48' flatcar. Carload charges will be based on weights of not less than _____pounds.

STOP! DO NOT PROCEED UNTIL TOLD TO DO SO BY YOUR INSTRUCTOR.

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PROCEDURE

EXERCISE IV

The following seven problems will be used as a performance test of this objective. These problems will be completed without error.

	LIST OF AIR FORCE SHIPMENTS	PROPER FREIGHT DESCRIPTION	LESS CARLOAD RATINGS	CARLOAD MINIMUM POUNDS	CARLOAD RATINGS
PROBLEM 1.	Ball Bearings, NOIBN in Boxes				
	UFC ITEM NO. _____				
PROBLEM 2.	Cork Shoe Insoles in Bales				
	UFC ITEM NO. _____				
PROBLEM 3.	Fiberboard Punch Boards, Flat in boxes				
	UFC ITEM NO. _____				
PROBLEM 4.	Nose Truck, Hand				
	UFC ITEM NO. _____				

LIST OF AIR FORCE SHIPMENTS	PROPER FREIGHT DESCRIPTION	LESS CARLOAD RATINGS	CARLOAD MINIMUM POUNDS	CARLOAD RATINGS
PROBLEM 5. Antitank Mine Fuses, Inert	_____	_____	_____	_____
UFC ITEM NO. _____	_____			
	_____			
	_____			
PROBLEM 6. Steel Ammunition Cannon Links, in Crates	_____	_____	_____	_____
UFC ITEM NO. _____	_____			
	_____			
	_____			

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PROBLEM 7

A shipment of 17,500 pounds of aircraft landing gears, NOIBN, KD, is to be shipped from Luke AFB, AZ to Langley AFB, VA. It is to be loaded in a 43'5" boxcar having a cubic capacity of 5200 cubic feet. Carload charges will be based on weight of not less than _____ pounds.

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COURSE REVIEW

A formal internal review process through which all technical elements of an instructional system are examined to determine if they are current and effectively supporting the training objectives.

COURSE REVIEW AND TRAINING MANAGEMENT FEEDBACK GUIDE

J3ABR60231 000
COURSE NUMBER

Freight Traffic Specialist
COURSE TITLE

This report has been reviewed and approved:

signed 6 Oct 77
SIGNATURE OF BRANCH CHIEF/DATE (SAAS)

signed 14 Oct 77
SIGNATURE OF GROUP TRAINING SECTION CHIEF/DATE

signed 17 Oct 77
SIGNATURE OF GROUP COMMANDER/DEPARTMENT CHIEF/DATE

This report has been reviewed:

signed 18 Oct 77
SIGNATURE OF RESOURCE MANAGEMENT REVIEWER/DATE

signed 20 Oct 77
SIGNATURE OF TRAINING PLANS REVIEWER/DATE

SIGNATURE OF TRAINING SERVICES REVIEWER/DATE (SHCS)

signed 21 Oct 77
SIGNATURE OF OPERATIONS REVIEWER/DATE

signed 26 Oct 77
SIGNATURE OF TRAINING EVALUATION REVIEWER/DATE

INSTRUCTIONS FOR COMPLETING STTC FORM 670

Completion of the form is self-explanatory with the following exceptions:

Use a check mark (✓) in the column marked "Reviewed" for each applicable review and feedback item. Items found to be inadequate will be explained in the "Remarks" section *(indicating the corrective action already taken or the action you recommend)*. Inadequate items must also be entered in Section III. Enter an N/A in the "Reviewed" column for not applicable items.

The primary reviewer will be the instructor supervisor or an individual at a higher echelon in the training group, department, or instructor training branch. The primary reviewer evaluates the status of each item as it pertains to the course and the applicable regulation or manual. The secondary reviewer *(utilized in SAAS only)* reviews items and verified entries made by the primary reviewer. And, he provides entries for those areas which the primary reviewer does not have immediate access. The secondary reviewer may be any competent individual between the echelon of the primary reviewer and the commander of the school *(preferable an individual within the group/department/division)*.

In Section I, Part A and Section II, Part A, for the first five items on each page, enter the date of each applicable document or report. The "open items" *(Section II, Part A)* refer to actions pending in the reports. Until final actions on the recommendations in the reports are complete, entries in the "Remarks" and Section III are required. If item 8 *(Section II, Part A)* is found to be inadequate, an analysis will be included in "Remarks" IAW paragraphs 2a and b, Atch 1, ATCR 52–1. Section II, Part B, will be accomplished only if the condition exists at the time of the review. Otherwise an N/A will be entered on item 1. If an entry is made, it will be suspensed in Section III.

If a reviewer outside the training group/department or instructor training branch initially lists an incomplete action in the "Remarks" column of Sections I or II, this reviewer will complete Columns 1,2, and 3 of Section III. All entries in "Remarks" by other than primary reviewer will be identified by signature, office symbol, and date.

The responsible instructor supervisor or action initiator signs in column 5, Section III, indicating knowledge of the final completed action.

The applicable school staff agency is responsible for verification of all entries *(in their functional area)* made by the group/department/division/etc., primary and secondary reviewers.

COURSE REVIEW GUIDE FOR COURSE NO. J3ABR60231 000

SECTION I

PART A. COURSE CONTROL DOCUMENTS

REVIEW ITEMS	DATE	REVIEWED
1. COURSE ANNOUNCEMENT IN AFM 50-5.	1 JUN 77	✓
2. COURSE/SPECIALTY TRAINING STANDARD. (ATCR 52-17, AFR 8-13)	12 Aug 74	✓ *
3. COURSE CHART. (ATCR 52-6)	7 May 76	✓ *
4. PLAN OF INSTRUCTION. (ATCR 52-7)	30 Jul 76	✓ *
5. SPECIALTY DESCRIPTION. (AFM 36-1, AFM 39-1)	1 JUN 77	✓
6. TRAINING OBJECTIVES-MEANINGFUL AND PERTINENT. (ATCR 52-1)		✓
7. ELIMINATION OF PME DUPLICATION. ((ATC/TTMI ltr, 21 Jul 76)		✓

PART B. INSTRUCTIONAL MATERIALS

REVIEW ITEMS	REVIEWED
1. STUDY GUIDES AND WORKBOOKS. (ATCR 52-18, ATCP 50-6)	✓
2. PROGRAMMED TEXTS. (ATCR 52-18, ATCP 50-6, AFM 50-1)	✓
3. OTHER INSTRUCTIONAL MATERIALS. (ATCR 52-18, ATCP 50-6)	✓
4. LEARNING RESOURCE CENTER INSTRUCTIONAL MATERIALS. (ATC/OG 52-2)	✓

REMARKS

* Course control documents are adequate for continued course operation pending approval of proposed final STS submitted to ATC/TTMS on 27 July 77.

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SIGNATURE OF PRIMARY REVIEWER	JOB TITLE	DATE
signed	Course Supervisor	771004
SIGNATURE OF SECONDARY REVIEWER	JOB TITLE	DATE
signed	Branch Advisor	771005

COURSE REVIEW GUIDE FOR COURSE NO. J3ABR60231 000

PART C. TRAINING EQUIPMENT AND TRAINING FACILITIES

NOTE: As applicable, check each review item for suitability, condition, obsolescence, and quantity.

REVIEW ITEMS	REVIEWED
1. EQUIPMENT MAINTENANCE. *(ATCR 66-7)*	✓
2. SUPPLY SUPPORT *(Timely Response)* *(AFR 67-23, STTCR 65-1)*	✓
3. TRAINING EQUIPMENT.	
A. TRAINERS. *(ATCR 52-18)*	✓
B. TRAINING AIDS. *(ATCR 52-18)*	✓
C. AUDIO-VISUAL EQUIPMENT. *(AFR 95-14)*	✓
D. OTHER TRAINING DEVICES. *(ATCR 52-18)*	✓
E. TAs AUTHORIZED IN ATC SUP 1, AFR 0-10.	NA
4. TRAINING FACILITIES.	✓
5. TRAINING FACILITIES MAINTENANCE.	✓
6. LEARNING RESOURCE CENTER EQUIPMENT AND FACILITIES.	✓

REMARKS

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SIGNATURE OF PRIMARY REVIEWER	JOB TITLE	DATE
signed	Course Supervisor	771004
SIGNATURE OF SECONDARY REVIEWER	JOB TITLE	DATE
signed	Branch Advisor	771005

COURSE REVIEW GUIDE FOR COURSE NO. J3ABR60231 000

PART D. INSTRUCTIONAL METHODS AND TECHNIQUES

REVIEW ITEMS	REVIEWED
1. INSTRUCTIONAL METHODS/TECHNIQUES COMPATIBLE WITH STUDENT POPULATION. *(AFM 50-62)*	✓
2. INSTRUCTOR LESSON PLANS. *(ATCR 52-18, ATCR 52-7)*	✓

NOTE: Supervisory visits are reviewed under "Part F, Item 3."

PART E. STUDENT MEASUREMENT *(ATCR 52-3)*

REVIEW ITEMS	REVIEWED
1. TEST ITEM MEASUREMENT OF KNOWLEDGE AS APPLIED TO SPECIALTY TASKS.	✓
2. COMPREHENSIVENESS OF TESTING OF CRITERION OBJECTIVES.	✓
3. OBJECTIVITY, CLARITY, CONCISENESS, AND READING LEVEL OF TEST ITEMS.	✓
4. ADMINISTRATOR UNDERSTANDING AND APPLICATION OF PRESCRIBED MEASUREMENT POLICIES AND PROCEDURES.	✓
5. INSTRUCTIONS FOR TEST ADMINISTRATION.	✓
6. TIME ALLOTED FOR ADMINISTRATION AND CRITIQUE OF MEASUREMENT TESTS.	✓
7. PRECAUTIONS TO AVOID TEST COMPROMISE DURING TEST ADMINISTRATION AND CRITIQUE.	✓
8. CONTROL OF TESTING MATERIALS.	✓

REMARKS

SIGNATURE OF PRIMARY REVIEWER	75 JOB TITLE	DATE
signed	Course Supervisor	771004
SIGNATURE OF SECONDARY REVIEWER	JOB TITLE	DATE
signed	Branch Advisor	771005

COURSE REVIEW GUIDE FOR COURSE NO. J3ABR60231 000

PART F. INSTRUCTOR AND SUPERVISORY STAFF *(ATCR 52-8)*

REVIEW ITEMS	REVIEWED
1. INSTRUCTOR QUALIFICATIONS. *(Any Pipeline retentions will require a remark.)*	✓
2. INSTRUCTOR INSERVICE TRAINING PROGRAM.	✓
3. INSTRUCTOR EVALUATION PROGRAM.	✓
4. MANNING POSTURE.	✓
5. MULTIPLE INSTRUCTOR REQUIREMENTS.	✓
6. SUPERVISOR QUALIFICATIONS.	✓
7. SUPERVISOR DEVELOPMENT EFFORTS.	✓
8. FACULTY UTILIZATION.	✓

PART G. STUDENT CRITIQUES OF TRAINING INSTRUCTION *(ATCR 52-29)*

REVIEW ITEMS	REVIEWED
1 INSTRUCTOR AWARENESS OF STUDENT CRITIQUE PROGRAM.	✓
2 SUPERVISOR AWARENESS OF STUDENT CRITIQUE PROGRAM.	✓
3 STUDENT AWARENESS OF STUDENT CRITIQUE PROGRAM.	✓
4 ADMINISTRATION OF STUDENT CRITIQUE PROGRAM.	✓
5. APPROPRIATENESS OF ACTION TAKEN IN RESPONSE TO FINDINGS FROM STUDENT CRITIQUES. *(Course, Branch, Group, Department, School, Center, Higher Headquarters)*	✓

REMARKS

SIGNATURE OF PRIMARY REVIEWER	JOB TITLE	DATE
Signed	76 Course Supervisor	771004
SIGNATURE OF SECONDARY REVIEWER	**JOB TITLE**	**DATE**
Signed	Branch Advisor	771005

COURSE REVIEW GUIDE FOR COURSE NO. J3ABR60231 000

SECTION II

PART A. TRAINING IMPROVEMENTS EFFECTED

FEEDBACK ITEMS	DATE	REVIEWED
1. TRAINING EVALUATION REPORT OPEN ITEMS. (ATCR 52-1)	23 Sep 75	✓
2. STAFF SURVEILLANCE REPORT OPEN ITEMS. (AFR 124-1)	16-27 Feb 76	✓
3. STANDARDIZATION/EVALUATION REPORT OPEN ITEMS. (ATCR 52-24)	22 Aug - 2 Sep 77	✓
4. OCCUPATIONAL SURVEY REPORT (Actions required) (ATCR 52-22)	Oct 73	✓
5. SELF-INSPECTION REPORT OPEN ITEMS. (AFR 123-1)	Oct 76	✓
6. TRAINING QUALITY REPORT(S) OPEN ITEMS. (AFR 50-38)		✓
7. PREVIOUS COURSE REVIEW OPEN ITEMS. (ATCR 52-1)		✓
8. ELIMINATION TRENDS (Atch 1, ATCR 52-1)		✓

REMARKS

77

SIGNATURE OF PRIMARY REVIEWER	JOB TITLE	DATE
Signed	Course Supervisor	771004
SIGNATURE OF SECONDARY REVIEWER	JOB TITLE	DATE
Signed	Branch Advisor	771005

COURSE REVIEW GUIDE FOR COURSE NO. J3ABR60231 000

PART B. TRAINING STANDARD DEVIATIONS

(AFR 8-13, ATC Sup 1; ATCR 52-17) IDENTIFY THE NUMBER OF TRAINING STANDARD DEVIATIONS, THE REASON FOR EACH DEVIATION, THE CTS/STS PARAGRAPH AFFECTED, THE NUMBER OF GRADUATES INVOLVED, AND THE ANTICIPATED GET WELL DATE.

TRAINING STANDARD DEVIATION/REASON FOR DEVIATION	TRAINING STANDARD PARA NO.	NUMBER GRADUATES INVOLVED	GET WELL DATE
1. NA			
2.			

PART C. STUDENT ACCOMODATIONS AND MORALE

FEEDBACK ITEM	REVIEWED
1. RESULTS OF SCREENING STUDENTS ABOUT ADEQUACY AND SUITABILITY OF STUDENT HOUSING AND MORALE.	✓

REMARKS

SIGNATURE OF PRIMARY REVIEWER	JOB TITLE	DATE
Signed	Course Supervisor	771004
SIGNATURE OF SECONDARY REVIEWER	JOB TITLE	DATE
Signed	Branch Advisor	771005

STTC FORM 670

COURSE REVIEW GUIDE FOR COURSE NO. J3ABR60231 000

SECTION III

RECORD OF FOLLOWUP ACTIONS

SECTION, PART, ITEM NO.	SCHOOL ACTION ACTIVITY	ESTIMATED COMPLETION DATE	ACTUAL COMPLETION DATE	ACTION INITIATOR	SIGNATURE OF GP/DEPT OPR (SHCS-DEPT CHIEF)
1	2	3	4	5	6

SECTION IV

TRAINING MANAGEMENT INFORMATION *(SAAS Only) (ATCR 52-1, Atch 5, Paragraph 8)*

For Type 3 low flow courses *(25 or fewer graduates per year)*, **remarks must contain justification for either continuing or discontinuing course. This information is required on other Type 3 courses only if recommendation is to discontinue.**

1. LIST PROGRAMMED PRODUCTION FOR:

   A. CURRENT FY: _____ REFERENCE: _____

   B. NEXT FY: _____ REFERENCE: _____

2. CIRCLE CATEGORY OF TRAINING A B OTHER _____

	YES	NO
3. IS ACTUAL ENTRY MEETING THE PROGRAMMED ENTRY? *(If no, specify in Remarks Section)*		
4. HAS THE ATC TRAINING MANAGER, SINCE THE LAST REVIEW, DIRECTED CONTINUANCE OF THIS COURSE IN ITS PRESENT LOW FLOW STATUS? *(SAAS Training Plans Branch initiated)*		
5. DO STUDENT OR SUPERVISOR FEEDBACK SOURCES INDICATE A VALID NEED FOR TRAINING TO BE CONDUCTED IN THIS COURSE?		
6. DOES THIS COURSE CROSS-UTILIZE THE FOLLOWING RESOURCES WITH OTHER COURSES?		
A. MANPOWER		
B. EQUIPMENT		
C. FACILITIES		
7. COULD THIS TRAINING BE INCORPORATED IN ANOTHER COURSE? *(If yes, explain in Remarks Section)*		
8. COULD THE STS/CTS SKILL LEVELS BE ATTAINED IF TRAINING WERE CONDUCTED IN ANOTHER TYPE ENVIRONMENT, I.E., OJT, FTD. MTT, ETC.? *(If yes, please specify in Remarks Section)*		
9. DO YOU CONSIDER THIS COURSE TO BE COST EFFECTIVE?		

10. DO YOU RECOMMEND THE COURSE BE

☑ CONTINUED AS IS ☐ DISCONTINUED ☐ REVISED

REMARKS *(Add Supplemental Sheets as Necessary)*

SIGNATURE OF PRIMARY REVIEWER	JOB TITLE	DATE
Signed	Course Supervisor	771004
SECONDARY	JOB TITLE	DATE
Signed	Branch Advisor	771005

TRAINING EVALUATION REPORT

A document that contains summaries and analyses, of the findings regarding relevance and effectiveness of training. Conclusions, recommendations and actions required to improve the training program are also included in the document.

EVALUATION OF COURSE 3ABR60231, FREIGHT TRAFFIC SPECIALIST

23 September 1975

DEPARTMENT OF THE AIR FORCE
Sheppard Technical Training Center (ATC)
USAF School of Applied Aerospace Sciences
Training Evaluation Division
Sheppard Air Force Base, Texas

USAF Sch of Applied Aerosp Sci
Sheppard Technical Training Center (ATC)
Sheppard Air Force Base, Texas 76311

TER SH 75-14
23 September 1975

EVALUATION OF COURSE 3ABR60Z31, FREIGHT TRAFFIC SPECIALIST

ABSTRACT

This evaluation was conducted to assess the adequacy of course training in promoting effective job performance. Sixty-five graduate supervisors participated in the field evaluation.

Results of this report indicate 3ABR60Z31, Freight Traffic Specialist, is providing adequate training. Eighty-nine percent of the graduates were rated satisfactory or better in the proficiency of their duties. Training levels for several tasks are to be examined by the Department of Transportation Training and the School Operations Division to determine if certain task levels need to be reduced or remain in the course. Training time for identified tasks will be examined by the Department of Transportation Training and the School Operations Division to determine if course length should be reduced since a limited number of graduates are performing these tasks in the field.

Robert R Reid

ROBERT R. REID, JR., Colonel, USAF
Commander
USAF Sch of Applied Aerosp Sci

DISTRIBUTION: HQ USAF/DPPTB; ADC/DPATL/DPAT; ATC/TTSE/TTMS; AFRES/DPAT; HQ COMD/DPAT; MAC/DPATA/DPAT; SAC/DPATL/DPAT; TAC/DPPLATC/DPAT; USAFSS/DPAT; AFCS/DPAT; Chanute, Keesler, Lackland, Lowry/TTE; Sheppard/TTOXU/TTR/MSE

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Attachment 1 - Direct Correspondence Questionnaire	7
Attachment 2 - Supervisors' Evaluation of Graduate	8

EVALUATION OF COURSE 3ABR60231, FREIGHT TRAFFIC SPECIALIST

SECTION A -- INTRODUCTION

1. Background.

a. Course Description. This course trains airmen to classify, document and arrange for shipment of government-sponsored cargo by military air, motor vehicle and water carrier, and by commercial air, rail, express, motor carrier, parcel post, pipeline and water carriers. It also includes training in operation of materials handling equipment and in receiving practices and procedures.

b. Course Prerequisites. Minimum aptitude cluster percentile of Administration 40 is mandatory.

c. Course Flow. Course 3ABR60231 is programmed to produce 193 graduates during FY 75.

d. Previous Evaluation. The last evaluation report was published in November 1973 and revealed no significant training deficiency. Seventy-six percent of the graduates rated course training satisfactory or excellent. No listing of STS items appeared in that report, so no comparison can be made.

2. Evaluation Objectives. This evaluation was conducted to determine the effectiveness of training provided by Course 3ABR60231.

a. Training Evaluation Plan (TEP). TEP 75-14 as approved by the Commander, USAF School of Applied Aerospace Sciences, Sheppard Air Force Base, Texas, established the requirement to conduct a field survey of graduates to determine the overall adequacy of training.

b. Authority. This evaluation project was conducted in accordance with AFR 50-38, Field Evaluation of Formal School Graduates, and ATCR 52-1, Training Evaluation and Course Reviews.

3. Scope of Evaluation. Questionnaires were mailed to supervisors of graduates who completed the course from June 1974 through January 1975. Sixty-five questionnaires were mailed, 65 returned and 65 were usable. Attachment 1 of this report contains a detailed listing of major commands/agencies that received questionnaires and return rates for each.

SECTION B -- PROCEDURES

4. Methodology.

a. A two-part automated questionnaire was mailed to supervisors of 65 graduates. Part I required the supervisor to supply some background information on the graduate and his/her progress. Part 2 consisted of a listing of 26 Specialty Training Standard items. Supervisors were asked to study the STS and the course training proficiency level and then rate the graduate's performance with either "Zero Proficient," "Extremely Limited," "Partially Proficient," "Competent," "Highly Proficient" or "Not Performed."

b. Computer Retrieval Data. The GEM date for this evaluation is 25 June 1975, and the survey ID is 50306.

c. Training Evaluation personnel interviewed two graduates of Course 3ABR60231--one at March AFB and one at Carswell AFB.

SECTION C -- FINDINGS

5. Questionnaire Returns. Supervisor field questionnaires were mailed to a wide spectrum of major USAF air commands or operating agencies. Sixty-five supervisors of graduates who completed 3ABR60231 from June 1974 through January 1975 were selected to participate in this evaluation. Specific return rates for each of the major air commands or operating agencies are found in Attachment 1. Of the 65 questionnaires mailed, 65 were returned and deemed usable. This reflects a return rate of 100%.

6. Graduate Information. As part of the field questionnaire survey of Course 3ABR60231, supervisors were asked to provide information regarding their graduates' field assignments, duty AFSCs and overall job performance.

a. Graduates' Duty AFSCs. At the time of the questionnaire survey, graduates held the following duty AFSCs:

Table 1 - Graduates' Duty AFSCs

AFSC	NO OF GRADUATES
60231	40
60251	23
60271	2
TOTAL	65

b. Graduates' Ranks/Grades. As part of the questionnaire survey, supervisors indicated graduates' current grades.

Table 2 - Graduates' Grades

GRADE	NO OF GRADUATES
AB	1
Amn	34
A1C	27
Sgt	2
SMSgt	1
TOTAL	65

c. Graduates' Educational Background. Six graduates in this survey have some college training. Forty-two graduates have high school diplomas, and four graduates did not complete high school.

7. Job Performance Rating.

a. Supervisors were asked to rate graduates on their performance proficiency on 26 tasks taught in the course to the 2b level. Supervisors could rate the graduate either "Zero Proficient," "Extremely Limited," "Partially Proficient," "Competent" or task "Not Performed."

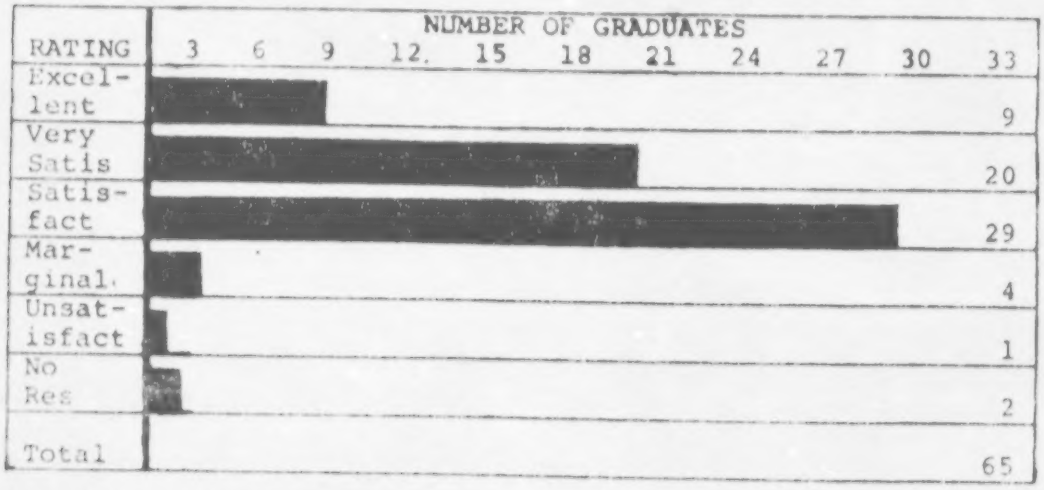
b. Attachment 2 of this report provides item by item results of the supervisors' ratings of graduate job performance. Most supervisors rated their graduates partially proficient or better;

however, on seven of the tasks, 21 percent or more of the graduates were rated below the course proficiency level. Task numbers 4, 8, 12, 14, 16, 18 and 20 fall into this category. Four of these tasks are utilized by less than 50 percent of the graduates. Item 14, Compute demurrage/detention charges, received the lowest utilization rate. Only 22 percent of the graduates perform this task.

8. Overall Graduate Rating.

a. Supervisors were asked to evaluate the graduate's overall job performance and rate the graduate either "Excellent," "Very Satisfactory," "Satisfactory," "Marginal" or "Unsatisfactory." Supervisor responses are summarized in Table 3.

Table 3 - Supervisors' Overall Ratings of Graduates



b. The graduate who received an unsatisfactory rating has a severe speech defect and is currently undergoing speech therapy. The supervisor stated that the graduate "simply cannot or will not follow instructions." He feels that the course itself is excellent, but wonders if perhaps there has been a failure to maintain rigorously high standards to insure such graduates as his from passing through the course.

c. Four graduates received marginal ratings. Two of the supervisors made no comments. However, the supervisor of the

remaining two graduates felt that the course failed by producing graduates who were woefully lacking in typing skill. It was basically the graduates' inability to type that caused both to be rated marginal.

9. OJT Difficulties. Only six supervisors reported their graduates were having any difficulty with upgrade training. Five of these felt their graduates would achieve a 5-level, but it would require excessive training time. All other graduates were progressing well on OJT and were expected to achieve their 5-level within the normal time span.

10. Supervisors' Comments.

a. "Teach less railroad contracts." - 3

b. "Should be a little more on managerial portion and supervision." - 1

c. "The course is just the basic fundamentals of traffic management and a lot of the younger airmen are not grasping that knowledge; and therefore know very little of what is really happening in the traffic management field. I think the course should be discontinued, because I feel a young airman would learn the job much easier if he started his OJT straight from basic training." - 1

d. "I believe the training given in tech school is quite adequate for the 602X1. I sincerely believe the only time needed should be for adjustment to new base and complete CDCs. Try and instill more responsibility and safety in handling cargo. Students become too careless in handling procedures." - 1

e. "Typing course should be taught throughout the whole course, not just for two weeks." - 4

f. "More training needed on MHE equipment and have SF Form 46 issued, along with AF Form 623 prior to leaving your school." - 1

g. "Observation with this trainee and prior graduates reveals a weakness with freight classification, tariffs and rates. It appears to be confusing to most graduates (CDC 60251) because it gives so much attention to rail." - 1

11. Graduate Interviews.

a. March Air Force Base. The airman interviewed said he had no complaints with the course. So far, his job has only dealt with inbound cargo. Therefore, he has not yet utilized much of the training. At the time of the interview, the graduate was working on the first volume of his 5-level CDC and had not tested yet.

b. Carswell Air Force Base. This graduate felt the course was fine and gave no recommendations for improvement. At the time of the interview, he had completed the 5-level CDC, except for the final examination.

SECTION D--CONCLUSIONS, RECOMMENDATIONS AND ACTIONS

12. Compatibility of ATC Resident Training and Job Requirements. Analysis of the field questionnaire survey to supervisors of graduates of this course reveals the course is providing adequate training; 89 percent of the graduates were rated satisfactory or better in the performance of their duties.

a. Paragraph 7 and Attachment 2 of this report indicate STS tasks 8, 13, 14, 16, 18, 20, and 21 are not performed by 50 percent of the graduates in the field. These tasks should be examined to determine if these training levels should be reduced in Course 3ABR-60231 for these particular tasks. TTOXU will examine STS 602X1 and initiate action to determine if training for these tasks should be included in the course and TTE will be notified in writing of proposed changes, actions, and estimated completion dates of actions by January 1976.

b. STS tasks 6, 9, 10, 11, 14, 15, 17, and 23 show that 90 percent or more of the graduates were performing these tasks at or above code level. The above tasks indicate that the level of training needs to be reevaluated. TTOXU will review STS 602X1 and initiate action to determine if training time should be reduced on these training tasks levels for Course 3ABR60231. If training times are reduced, TTOXU will notify TTE of proposed changes, actions, and estimated completion dates of actions by January 1976.

c. The Department of Transportation Training has increased the training time for tasks 4, 8, and 12 in paragraph 7 and Attachment 2. Training time for tasks 14, 16, 18, and 20 will be evaluated by the Department of Transportation Training and TTOXU by 1 Nov 75 to determine necessary changes in instructional emphasis and/or time allocation to increase student proficiency level on these tasks. TIE will be notified in writing of the results.

DIRECT CORRESPONDENCE QUESTIONNAIRE	CDC NO	FTD RESIDENT COURSE NO	NO OF GRADUATES PROGRAMMED/FY	FISCAL YEAR
		3ABR60231	193/75	75

QUESTIONNAIRE COMPLETED BY (Check applicable box)

☐ FTD/RESIDENT COURSE GRADUATES ☒ SUPERVISORS OF XX/RESIDENT COURSE GRADUATES ☐ CDC ENROLLEES ☐ SUPERVISORS OF CDC ENROLLEES

MAJCOM	No Orgs or Units	No Mailed	Returned w/o Followup	No of Followup Actions	Returned After Followup	Total No Returned	Total Return Rate (%)	No Usable	Quality Rejects	Usable Return Rate (%)	Remarks
A	B	C	D	E	F	G	H	I	J	K	L
ADC	3	3	0	0	0	3	100%	0	0	100%	
ATC	6	11	11	0	0	11	100%	0	0	100%	
AFRes	1	1	1	0	0	1	100%	0	0	100%	
HQCOMD	1	2	2	0	0	2	100%	0	0	100%	
MAC	8	16	16	0	0	16	100%	0	0	100%	
SAC	7	16	16	0	0	16	100%	0	0	100%	
TAC	6	14	14	0	0	14	100%	0	0	100%	
USAFSS	1	1	0	1	1	1	100%	0	0	100%	
AFCS	1	1	1	0	0	1	100%	0	0	100%	
USAF TOTAL	34	65	64	1	1	65	100%	0	0	100%	

ATC FORM OCT 74 1155

8 14-12

92

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SUPERVISORS' EVALUATION OF GRADUATE

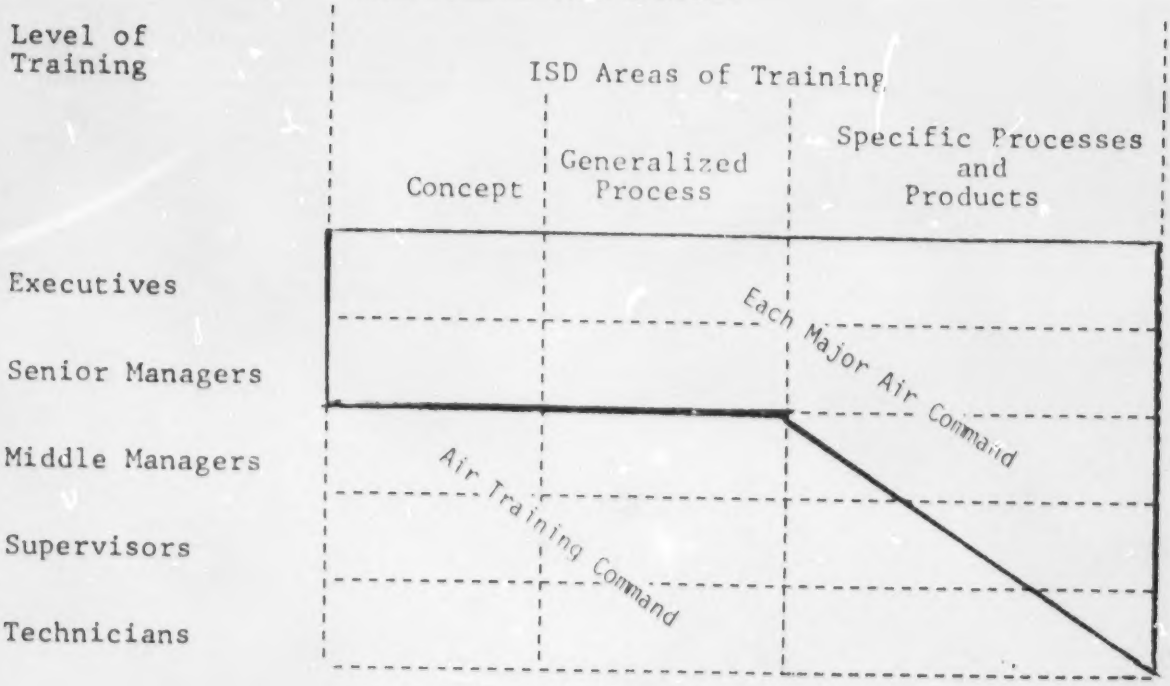
TRAINING STANDARD TASKS	A	B	C	D	E	F	G	H	I
	Training Proficiency Level	Not Performed	Zero Proficiency	Extremely Limited	Partially Proficient	Competent Ability	Highly Proficient	Percent Performing at or Above Code Level Partially Proficient	Percent Performing
1. Use index to identify transportation publications	2b	17	1	7	12	24	2	83%	73%
2. Use index to identify transportation forms and their prescribed directives	2b	16	1	8	14	22	2	81%	75%
3. Use transportation publications to locate procedures, instructions and information pertinent to transportation	2b	9	1	6	16	29	2	87%	83%
4. Convert military equipment and materials identities to freight nomenclature	2b	22	3	6	9	21	3	79%	68%
5. Identify and classify military equipment and material for transportation compatibility and mode	2b	16	4	2	16	23	3	89%	89%
6. Identify requirements (time, handling and routing) of shipments	2b	15	2	3	13	27	4	90%	77%
7. Select mode of transportation that meets shipping requirements	2b	15	2	4	8	29	6	89%	77%
8. Use tariffs and regulations to determine means and methods of transporting explosives and other dangerous items	2b	33	5	6	11	7	2	65%	50%
9. Determine weight of shipment being transported	2b	10	1	1	7	33	12	96%	84%
10. Determine necessity for movement and apply appropriate priority	2b	22	1	3	8	25	5	90%	68%
11. Consolidate small items or packages on the basis of: (a) similar priorities; (b) delivery dates; (c) handling requirements, (d) transportation ratings	2b	24	0	4	10	18	8	90%	63%

SUPERVISORS' EVALUATION OF GRADUATE (cont'd)

TRAINING STANDARD TASKS	A	B	C	D	E	F	G	H	I
	Training Proficiency Level	Not Performed	Zero Proficiency	Extremely Limited	Partially Proficient	Competent	Highly Proficient	Percent Performing at or Above Code Level Partially Proficient	Percent Performing Task
12. Route shipments on the basis of: (a) size, weight and handling requirements; (b) transit time allowed; (c) comparative rates; (d) availability of transport facilities; (e) special military freight rates; (f) export traffic regulations; (g) using container express service (CONEX); (h) embargoes; (i) inclement weather; (j) security requirements	2b	25	2	9	10	11	7	72%	61%
13. Maintain rail car/motor vehicle records	2b	35	1	0	9	18	1	97%	45%
14. Compute demurrage/detention charges	2b	50	2	5	3	4	0	50%	22%
15. Prepare and maintain bills of lading registers	2b	20	1	0	4	29	9	98%	68%
16. Maintain obligation authorities	2b	48	2	4	3	3	4	63%	25%
17. Record and report in transit time of shipments	2b	28	2	1	4	24	5	92%	56%
18. Convert commercial bills of lading to government bills of lading	2b	39	4	3	5	12	1	72%	39%
19. Operate typewriter	2b	4	1	8	8	37	6	85%	94%
20. Prepare discrepancy in shipment confirmation (DISCON)	2b	40	3	3	7	9	2	75%	38%
21. Prepare discrepancy in shipment report (DISREP)	2b	40	1	3	7	11	2	83%	38%
22. Prepare report of packaging and handling deficiencies	2b	50	2	0	5	5	2	86%	78%
23. Inspect labeling and markings	2b	14	1	2	5	35	7	94%	78%
24. Inspect shipments for quantity and condition	2b	9	1	5	3	35	12	89%	88%
25. Operate materials handling equipment	2b	15	5	3	11	23	7	84%	77%
26. Comply with MILSTAMP, MILSTEP and MILSTRIP documentation procedures	2b	15	1	9	12	35	6	88%	77%

1.3. Current Policy

RESPONSIBILITY FOR
AIR FORCE ISD TRAINING



Each Major Air Command including Air Training Command is responsible for training their personnel about the specific ISD process and products used within the command (column 3). Further, each command is responsible to train their own executives and senior managers. The courses in this handout are designed for curriculum developers and people who supervise training programs from all commands. The courses teach column 3, Specific Processes and Products, using examples developed by Air Training Command and the other Major Air Commands.

2. AIR FORCE LEVEL ISD COURSES

2.1. Managers

2.1.1. Description from Presentation

TITLE: Development and Management of Instructional Systems

LENGTH: 3-4 days (20 to 27 hours)

TARGET POPULATION: Junior/Middle Managers

NO	Senior and executive level managers.
YES	First and second level supervisors of those who actually write and develop training programs.

Approximate Annual Graduates

in residence	80
travel team	400
total	480

17%	Civilian	GS-7 - 14
48%	NCO	E5 - E8
34%	Officers	01 - 05

INSTRUCTIONAL APPROACH AND METHODS

- 2 instructors 16 students
- Elect Modules According to Need

  8 group-paced modules

  7 self-paced modules
- Methods Used

	Percent Time
Lecture/Dicussion	33 %
Counseling and Individual Instruction	40 %
Workbook Problems and Projects	22 %
Slide/Tape and Film	5 %

- Requirements:

  2 classrooms and administrative support

Hours	Approach and Module Topic
(7)	Group-Paced (required) USAF ISD Concepts
	Group-Paced Elective Modules
	ISD Projects Systems Analysis Occupational Survey Reports Measurement Programs Teaching - Learning Activity Plans Plans of Instruction
(17)	Instructional Systems Evaluation
	Self-Paced Elective Modules
	Job Task Inventories Instructional Standards Task and Knowledge Statements Criterion Objectives and Subobjectives Individualized Instructional Environments Learning Centers
(16)	Instructional Validation
Total Hrs Offered	
(40)	20-27 hours required

4.1.6.

COURSE CHART

NUMBER	PDS CODE	DATE
J30ZR/J40ST7500 003	PKN	4 April 1978

COURSE TITLE: Development and Management of Instructional Systems

SUPERSEDES COURSE CHART	DEPARTMENT OPR
30ZR/40ST7500-3, 27 October 1976	Faculty Development Division

APPLICABLE TRAINING STANDARD: CTS 30/R/40ST7500-3, 1 Aug 1974

ATC OPR AND APPROVAL DATE	CENTER OPR	COURSE SECURITY CLASSIFICATION
TTSE, 14 April 1978	Sheppard/TTGH	UNCLASSIFIED
INSTRUCTIONAL DESIGN	**LOCATION OF TRAINING**	**TARGET READING GRADE LEVEL**
Modular Scheduling - Group/ Lock Step/Self-Pacing	Sheppard AFB, TX *	N/A

COURSE LENGTH (3-4 ACADEMIC DAYS)

	Hours
Technical Training	
Classroom/Laboratory (C/L)	20-27
Related Training	
End of Course Appointments; Predeparture Safety Briefing (ATCR 127-1) (Applicable to TDY students only)	1
Total	21-28

REMARKS

Programmed classroom/laboratory time varies from 20 to 27 hours, based on student selection of elective modules. The times shown for elective modules reflect credit hours since individual student time for self-paced modules will vary. Class start day is Tuesday. For course J40ST7500 003 the hours of instruction per day may be adjusted by agreement with host activity. Effective Date: 1 May 1978 with class 780502. *The travel version of the course is taught at various locations.

TABLE I - MAJOR ITEMS OF EQUIPMENT

ATC FORM MAR 76 449 PREVIOUS EDITION IS OBSOLETE.

J30ZR/J40ST7500 003 **COURSE CHART – TABLE II – TRAINING CONTENT**

NOTE: Include time spent on technical training (TT) (classroom/laboratory (C/L) and complementary technical training (CTT)) and related training (RT). Exclude time spent on individual assistance (remedial instruction). A single entry of time shown for a unit is C/L time. When a double entry is shown, the second entry is CTT time.

DAY OF TNG / HRS PER DAY	1 2 3 4 5 6 7 8
	Course Material - UNCLASSIFIED Block I 20 to 27 Hrs TT
	Registration and Course Orientation (1 hr)
	The USAF Instructional System Development Concept (6 hrs)
	ISD Project (3 hrs)*
1	Systems Analysis (2 hrs)*
	Job Task Inventories (3 hrs)*
2	Occupational Survey Reports (4 hrs)*
	Instructional Standards (3 hrs)*
3	Task and Knowledge Statements (2 hrs)*
	Criterion Objectives and Subobjectives (3 hrs)*
4(4/8)	Measurement Programs (1 hr)*
	Individualized Instruction Environments (2 hrs)*
	Learning Centers (2 hrs)*
	Teaching-Learning Activity Plans (4 hrs)*
	Plans of Instruction/Syllabus (2 hrs)*
	Instruction Validation (1 hr)*
	Instructional System Evaluation (1 hr)*
	Course critique and graduation will be completed as a part of the last module scheduled for each student.
	*Elective Modules (33 hours) Each student will select specific modules on the basis of individual need/preference. The sum of the time for the modules selected will not be less than 13 hours nor greater than 20 hours.
	1 Hour RT

2.1.3.

DEPARTMENT OF THE AIR FORCE
Headquarters, Air Training Command
Randolph Air Force Base, Texas 78148

CTS SH52-30ZR/40ST7500-3
(PDS Code PKN)
1 August 1974

DEVELOPMENT AND MANAGEMENT OF INSTRUCTIONAL SYSTEMS

1. Purpose. This course training standard as prescribed in ATCR 52-17:

a. Establishes the tasks, knowledges, and proficiency level of training to be provided by Course 30ZR/40ST7500-3, Development and Management of Instructional Systems.

b. Provides the basis for the development of more detailed training materials and objectives and training evaluation instruments for the course.

2. Course Description. The course covered by this standard is designed to provide training to managers or supervisors within an Education or Training Activity in current concepts and philosophies in instructional system development and management. The scope of training includes instruction in Analyzing System Requirements, Defining Education or Training Requirements, Developing Objectives and Tests, Planning, Developing and Validating Instruction and Conducting and Evaluating Instruction.

NOTE: Each student will receive training indicated in paragraph 1 of attachment 1. Items in paragraph 2 are selected by students on the basis of individual needs/preference. Trainees entering this course at a level below that specified in AFM 50-5 or other established prerequisites cannot be expected to achieve the levels indicated.

3. Qualitative Requirements. Attachment 1 contains the list of tasks, knowledges and proficiency referenced in paragraph 1.

4. Recommendations. Comments and recommendations are invited concerning quality of ATC training and graduates. Use this CTS as a reference and address correspondence to ATC/TT, Randolph AFB, Texas 78148.

OFFICIAL

WILLIAM V. McBRIDE, Lt Gen, USAF
Commander

DAVID H. BUSS, Colonel, USAF
Director of Administration

1 Attachment
Qualitative Requirements

Sheppard OPR: Instructor Training Division
ATC OPR and Approval Date: TTSE, 9 Aug 1974
DISTRIBUTION: X

ATC/TTSE - 2; Air Training Command Bases - 2; Other MAJCOM activities (as requested by each MAJCOM HQ); Sheppard: TTOXU - 10; TTOC - 2; TTE - 1; TTM - 100

Task, Knowledge and Proficiency Level	
1. INSTRUCTIONAL SYSTEM DEVELOPMENT CONCEPT	A
2. INSTRUCTIONAL SYSTEM DEVELOPMENT ACTIVITIES	
a. Analyzing an operational system	B
b. Evaluate a job task inventory	2b
c. Evaluate an instructional standard	2b
d. Evaluate criterion and enabling objectives	2b
e. Analyze task and knowledge statements	2b
f. Measurement programs	B
g. Evaluate a teaching-learning activity plan	2b
h. Document a plan of instruction	2b
i. Validating instruction	B
j. Evaluate an instructional system	b
k. Plan an ISD project	2b
l. Design a learning center	2c
m. Interpret an Occupational Survey Report	2b
n. Evaluate individualized instruction environments	2b

2.2. Technicians

2.2.1 Description from Presentation

TITLE: Instructional Systems Designer

LENGTH:	Programmed	Average Completion Time
	5 weeks or 25 days	3.7 weeks or 18 days

TARGET POPULATION: Curriculum Developers

Approximate Annual Graduates: 275
(Taught inresidence only)

20 % Civilian GS/WB 7-12
60 % NCO E4 - E8
20 % Officers 01 - 05

Credit: 7 semester hrs, CCAF

INSTRUCTIONAL APPROACH AND METHODS

	Min	Max	
• 2 instructors	6	12	students
3 instructors	over 12		-24

- 10 Blocks

each block

Phase I: Theory, pre and post test
May proficiency advance to Phase II

Phase II: Performance, performance test
Workbook and Projects

- General Approach: Self-paced with individual assistance
- Methods Used:

	Percent Time
Lecture/Discussion	6 %
Testing/Pre-testing/Counseling	7 %
Self-Paced with Individual Instruction	37 %
Workbook Problems and Projects	42 %
Learning Center	6 %

- Requirements: 1 classroom, 1 test room, 1 counseling room, 1 laboratory shared with other courses, 1 centralized learning center shared with other courses.

Block	Content	Average Hours
1	Introduction to ISD	9
2	Job Requirements	20
3	Training Requirements	9
4	Objectives and Tests	15
5	Instructional Theory and Planning	11
6	Validation and Evaluation	8
7	Programmed Instructional Materials	23
8	Audiovisual Instructional Programs	20
9	Individualized Instruction	11
10	Workshop Application	24
		150

COURSE CHART

NUMBER	POS CODE	DATE
J3AZR75133 000	U4X	4 April 1978

COURSE TITLE
Instructional System Designer

SUPERSEDES COURSE CHART	DEPARTMENT OPR
J3AZR75133, 13 July 1977	Faculty Development Division

APPLICABLE TRAINING STANDARD
CTS 52-J3AZR75133, 13 July 1977

ATC OPR AND APPROVAL DATE	CENTER OPR	COURSE SECURITY CLASSIFICATION
TTSE, 14 April 1978	Sheppard/TTGH	UNCLASSIFIED
INSTRUCTIONAL DESIGN	**LOCATION OF TRAINING**	**TARGET READING GRADE LEVEL**
Combination of GLS and SP	Sheppard AFB, TX	11.6

COURSE LENGTH (25 ACADEMIC DAYS)	Hours
Technical Training	
Classroom/Laboratory (C/L)	194
Related Training	
End of Course Appointments; Predeparture Safety Briefing (ATCR 127-1)	6
Total	200

REMARKS Block I is Group/Lock Step. Blocks II - X are Self-Paced.
Blocks II - IX: Students may accelerate through these blocks of instruction by demonstrating their proficiency (knowledge and skill) of the subject matter by pretesting. In Block X the students will develop instructional materials to be used in their own training mission.

Effective date: 1 May 1978 with class 780509

TABLE I - MAJOR ITEMS OF EQUIPMENT

Projector, slide 35mm
Recorder/player/slide sync
Supermatic "60" projector
Recording Booth, Audio Recording

J3AZR75133 000 **COURSE CHART - TABLE II – TRAINING CONTENT**

NOTE: Include time spent on technical training (TT) (classroom/laboratory (C/L) and complementary technical training (CTT)) and related training (RT). Exclude time spent on individual assistance (remedial instruction). A single entry of time shown for a unit is C/L time. When a double entry is shown, the second entry is CTT time.

DAY OF TNG / HRS PER DAY	1 2 3 4 5 6 7 8
	Course Material - UNCLASSIFIED — 11 Hours TT BLOCK I - Introduction to ISD
1 2(3/8)	Course Orientation (3 hrs); The Systems Concept (2 hrs); The ISD Model (5 hrs); Written Test and Test Critique (1 hr).
	Course Material - UNCLASSIFIED — 26 Hours TT BLOCK II - Job Requirements
2(5/8) 3 4 5(5/8)	Counseling and Pretest (1 hr); Hierarchy of Performances (4 hrs); Duty/Task Statements (2 hrs); Data Sources (2 hrs); Job Task Inventory (5 hrs); Survey Instruments (2 hrs); Occupational Survey System (1 hr); Task Description Worksheets (6 hrs); Job Descriptions (2 hrs); Written Test and Test Critique (1 hr).
	Course Material - UNCLASSIFIED — 13 Hours TT BLOCK III - Training Requirements
5(3/8) 6 7(2/8)	Counseling and Pretest (1 hr); Selection of Training Tasks (5 hrs); Types of Training (1 hr); Instructional Standards (4 hrs); Support Requirements (1 hr); Written Test and Test Critique (1 hr).
	Course Material - UNCLASSIFIED — 19 Hours TT BLOCK IV - Objectives and Tests
7(6/8) 8 9(5/8)	Counseling and Pretest (1 hr); Behavior Analysis (7 hrs); Objectives (3 hrs); Tests (7 hrs); Written Test and Test Critique (1 hr).
	Course Material - UNCLASSIFIED — 15 Hours TT BLOCK V - Instructional Theory and Planning
9(3/8) 10 11(4/8)	Counseling and Pretest (1 hr); Learning Theory (4 hrs); Sequencing (1 hr); Instructional Design (1 hr); Media Selection (4 hrs); Teaching-Learning Activity Plan (3 hrs); Written Test and Test Critique (1 hr).
	COURSE MATERIAL - UNCLASSIFIED — 12 Hours TT BLOCK VI - Validation and Evaluation
11(4/8) 12	Counseling and Pretest (1 hr); Prevalidation Editing (3 hrs); Validation Process (1 hr); Revisions (1 hr); Implementation (1 hr); Internal Evaluation (1 hr); External Evaluation (3 hrs); Written Test and Test Critique (1 hr).

COURSE CHART – TABLE II – TRAINING CONTENT J3AZR75133 000

NOTE: Include time spent on technical training (TT) (classroom/laboratory (C/L) and complementary technical training (CTT)) and related training (RT). Exclude time spent on individual assistance (remedial instruction). A single entry of time shown for a unit is C/L time. When a double entry is shown, the second entry is CTT time.

DAY OF TNG / HRS PER DAY 1 2 3 4 5 6 7 8	
	Course Material - UNCLASSIFIED 29 Hours TT BLOCK VII - Programmed Instructional Materials
13 14 15 16(5/8)	Counseling and Pretest (1 hr); Effective Writing Guidelines (2 hrs); Introduction to Programmed Instruction (2 hrs); Planning for Programmed Instruction (6 hrs); Selected Response Programs (6 hrs); Adjunct Programs (3 hrs); Constructed Response Programs (6 hrs); Branching Programs (2 hrs); Written Test and Test Critique (1 hr).
	Course Material - UNCLASSIFIED 28 Hours TT BLOCK VIII - Audiovisual Instructional Programs
16(3/8) 17 18 19 20(1/8)	Counseling and Pretest (1 hr); Selection and Use of Audiovisual Media (5 hrs); Development of Visual Materials (13 hrs); Writing and Recording Narratives for Slide-Tape Programs (8 hrs); Written Test and Test Critique (1 hr).
	Course Material - UNCLASSIFIED 13 Hours TT BLOCK IX - Individualized Instruction
20(7/8) 21(6/8)	Counseling and Pretest (1 hr); Introduction to Individualized Instruction (1 hr); Individual Differences (2 hrs); Feasibility for Individualization (3 hrs); Degrees of Individualization (1 hr); Development Procedures (4 hrs); Written Test and Test Critique (1 hr).
	Course Material - UNCLASSIFIED 28 Hours TT BLOCK X - Workshop Application
21(2/8) 22 23 24 25	Project Selection (1 hr); Behavior Analysis (2 hrs); Objectives (1 hr); Tests (1 hr); Teaching-Learning Activity Plan (4 hrs); Instructional Materials (17 hrs); Instructor Guide/Lesson Plan (1 hr); Course Critique and Graduation (1 hr).
	6 Hours RT

2.2.3.

DEPARTMENT OF THE AIR FORCE
Headquarters, Air Training Command
Randolph Air Force Base, Texas 78148

CTS 52-J3AZR75133
(PDS Code U4X)
13 July 1977

INSTRUCTIONAL SYSTEM DESIGNER

1. Purpose. This course training standard as prescribed in ATCR 52-17:

a. Establishes the tasks, knowledges, and proficiency level of training to be provided by Course J3AZR75133, Instructional System Designer.

b. Provides the basis for the development of more detailed training materials and objectives and training evaluation instruments for the course.

2. Course Description. The course covered by this standard is designed to provide training to personnel within educational or training activities to apply instructional system development procedures. Scope of training includes the instructional system development concept; analyzing system requirements; determining training requirements; developing objectives and tests; planning, developing, and validating instruction; conducting and evaluating instruction; developing programmed instructional materials, audiovisual instructional programs, and individualized instruction.

NOTE: Trainees entering this course at a level below that specified in AFM 50-5, or other established prerequisites, cannot be expected to achieve the levels indicated.

3. Qualitative Requirements. Attachment 1 contains the lists of tasks, knowledges, and proficiency referenced in paragraph 1.

4. Recommendations. Comments and recommendations are invited concerning quality of ATC training and graduates, (AFR 50-38). Use this CTS as a reference and address correspondence to ATC/TT, Randolph AFB, Texas 78148.

OFFICIAL

JOHN W. ROBERTS, General, USAF
Commander

D. S. WEART, Colonel, USAF
Director of Administration

1 Attachment
Qualitative Requirements

This supersedes CTS SH52-3AZR75133, 7 May 1976
Sheppard OPR: Instructor Training Branch
ATC OPR and Approval Date: TTSE, 28 Jul 77
DISTRIBUTION: X (Continued on page 2)

QUALITATIVE REQUIREMENTS

CTS 52-J3AZR/5133

PROFICIENCY CODE KEY

	SCALE VALUE	DEFINITION: The Individual
TASK PERFORMANCE LEVELS	1	Can do simple parts of the task. Needs to be told or shown how to do most of the task. (EXTREMELY LIMITED)
	2	Can do most parts of the task. Needs help only on hardest parts. May not meet local demands for speed or accuracy. (PARTIALLY PROFICIENT)
	3	Can do all parts of the task. Needs only a spot check of completed work. Meets minimum local demands for speed and accuracy. (COMPETENT)
	4	Can do the complete task quickly and accurately. Can tell or show others how to do the task. (HIGHLY PROFICIENT)
*TASK KNOWLEDGE LEVELS	a	Can name parts, tools, and simple facts about the task. (NOMENCLATURE)
	b	Can determine step by step procedures for doing the task. (PROCEDURES)
	c	Can explain why and when the task must be done and why each step is needed. (OPERATING PRINCIPLES)
	d	Can predict, identify, and resolve problems about the task. (COMPLETE THEORY)
**SUBJECT KNOWLEDGE LEVELS	A	Can identify basic facts and terms about the subject. (FACTS)
	B	Can explain relationship of basic facts and state general principles about the subject. (PRINCIPLES)
	C	Can analyse facts and principles and draw conclusions about the subject. (ANALYSIS)
	D	Can evaluate conditions and make proper decisions about the subject. (EVALUATION)

– EXPLANATIONS –

* A task knowledge scale value may be used alone or with a task performance scale value to define a level of knowledge for a specific task. (Examples: b and 1b)

** A subject knowledge scale value is used alone to define a level of knowledge for a subject not directly related to any specific task, or for a subject common to several tasks.

– This mark is used alone instead of a scale value to show that no proficiency training is provided in the course, or that no proficiency is required at this skill level.

X This mark is used alone in course columns to show that training is not given due to limitations in resources.

DISTRIBUTION: X (Continued from page 1)

AAC/DPT - 2; ADCOM/DPXTF - 2; AFAFC/RMH-1; AFSC/DPAT-1;
AFLC/DPMTT - 2; AFRES/TSSR - 1; AFSC/DPAT - 1; ATC/DPATP - 1; ATC/TTSE - 1;
AU/DPAT - 3; CINCPACAF/DPATM - 1; CINCSAC/DPAT - 2; CINCUSAFE/DPAT - 3;
MAC/DPATTF - 4; NGB/DPT - 1; TAC/DPPTT - 2; USAFSS/DPAC - 2; Sheppard: TTGOXU - 12;
TTS - 1; TTGOI - 50.

Attachment 1

Task, Knowledge and Proficiency Level	
1. INSTRUCTIONAL SYSTEM DEVELOPMENT CONCEPT	B
2. ANALYZING SYSTEM REQUIREMENTS	
a. Hierarchy of job performances	B
b. Sources of job requirements data	B
c. Prepare job task inventories	2b
d. Prepare survey instruments to obtain job data	2b
e. Occupational survey procedures	B
f. Prepare task description worksheets	2b
g. Use job survey data to update job descriptions	2b
3. DETERMINING TRAINING REQUIREMENTS	
a. Use data from surveys to identify tasks requiring training	2c
b. Determine types of training required	2b
c. Prepare instructional standards	2b
d. Support requirements	B
4. DEVELOPING OBJECTIVES AND TESTS	
a. Conduct behavior analysis	3c
b. Develop learning objectives	3c
c. Construct measures for learning objectives	3c
d. Construct test items for threshold, entry level, diagnostic, and retention tests	2b
5. PLANNING, DEVELOPING, AND VALIDATING INSTRUCTION	
a. Learning theory	B
b. Sequence objectives and content	2b
c. Determine instructional design	2b
d. Select instructional media	2b

Task, Knowledge and Proficiency Level	
e. Prepare teaching-learning activity plans	3c
f. Instructional writing guidelines	B
g. Write programmed instructional materials	3c
h. Develop audiovisual instructional programs	2c
i. Design individualized instruction for use with learning resource centers	2b
j. Develop instructor guides/lesson plans	2b
k. Edit instructional materials prior to validation	2b
l. Validation process	B
m. Postvalidation revisions	B
6. CONDUCTING AND EVALUATING INSTRUCTION	
a. Implementation procedures	B
b. Internal evaluation procedures	B
c. External evaluation procedures	B

2.3. MEDIATED MATERIALS DEVELOPMENT

2.3.1. Description from Presentation

TITLE: Audiovisual Methods

LENGTH: 13 days normal
9 days for recent graduates of ISD Technician Course

TARGET POPULATION: (1) Course writers/developers who need general training on how to write mediated materials with assistance from Training Services technicians and directors.
(2) Course writers who need specific training on how to write, narrate, photograph, and produce slide/tape programs.

- Approximate Annual Graduates: 125

17 %	Civilian	GS-9 - 11
73 %	NCO	E4 - E8
10 %	Officer	01 - 05

- Credit: 3 semester hrs, CCAF

INSTRUCTIONAL APPROACH AND METHODS

	Min	Max
o 2 instructors	4	10 students

o 7 Blocks

o Approach

Self-paced, individual assistance
Individual Projects

o Methods Used:

	Percent Time
Lecture/Discussion (formal)	1 %
Learning Center	27 %
Individualized with problems and projects	72 %

o Requirements:

Facilities: 1 classroom laboratory, 1 laboratory shared with other courses, 1 centralized learning center.

Special Equipment: 126 Instamatic Visualmaker, Kit, Audio Recording Booth, Typewriters, Drawing Table; Assorted Lettering Aids, Photo Copy Stands, Lights, etc.

2.3.2.

COURSE CHART

NUMBER	POS CODE	DATE
J3AZR75000 00X	RVC	8 May 1978

COURSE TITLE
Audiovisual Methods

SUPERSEDES COURSE CHART	DEPARTMENT OPR
J3AZR75000 00X, 4 April 1978	Faculty Development Division

APPLICABLE TRAINING STANDARD
CTS 52-J3AZR75000 00X, 8 May 1978

ATC OPR AND APPROVAL DATE	CENTER OPR	COURSE SECURITY CLASSIFICATION
TTSE, 24 May 1978	Sheppard/TTGH	UNCLASSIFIED
INSTRUCTIONAL DESIGN	**LOCATION OF TRAINING**	**TARGET READING GRADE LEVEL**
Group/Lock Step, Self-Pacing	Sheppard AFB, TX Lowry AFB, CO	11.0

COURSE LENGTH (13 ACADEMIC DAYS)	Hours
Technical Training	
Classroom/Laboratory (C/L)	102
Related Training	
End of Course Appointments, Predeparture Safety Briefing (ATCR 127-1)	2
Total	104

REMARKS
Audiovisual lessons developed by students in this course will not be used in ATC classrooms until appropriate service test approval has been obtained.

Effective date: First class in August 1978

TABLE I - MAJOR ITEMS OF EQUIPMENT

Projector, Slide
Projector, Overhead
Projector, Motion Picture (Super 8mm, Magnetic Sound)
Recorder/Player, Cassette Audio Tape, Slide Sync
Camera Assembly, 35mm
Camera Assembly, Visualmaker Kit, Instamatic
Typewriters
Lettering Sets, Scriber and Templates
Slide Sorter/Viewer
Photographic Copy Stand
Table, Drawing
Recording Booth, Audio Recording
Texture Boards, Photographic Background
Storyboard Card Holder
Audio Mixer
PN 880 Photo Composing Machine

J3AZR75000 00X

COURSE CHART – TABLE II – TRAINING CONTENT

NOTE: Include time spent on technical training (TT) (classroom/laboratory (C/L) and complementary technical training (CTT)) and related training (RT). Exclude time spent on individual assistance (remedial instruction). A single entry of time shown for a unit is C/L time. When a double entry is shown, the second entry is CTT time.

DAY OF TNG	HRS PER DAY 1 2 3 4 5 6 7 8
1 thru 13	Course Material - UNCLASSIFIED Block I - 102 Hours TT Course Orientation and Overview (3 hrs) Communication through Audiovisual Media (7 hrs) Development of Visual Materials (18 hrs) Preproduction Workup and Storyboarding(27 hrs) Photography and Script Writing (36 hrs) Recording Audio Narratives (7.5) Audiovisual Program Evaluation (1.5 hrs) Written Test and Test Critique (1 hr) Course Critique and Graduation (1 hr)
	2 Hours RT

ATC FORM MAR 75 449 A PREVIOUS EDITION IS OBSOLETE.

DEPARTMENT OF THE AIR FORCE
Headquarters Air Training Command
Randolph Air Force Base, Texas 78148

CTS 52-J3AZR75000 00X
(PDS Code RVC)
8 May 1978

AUDIOVISUAL METHODS

1. Purpose. This course training standard as prescribed in ATCR 52-17:

a. Establishes the tasks, knowledges, and proficiency level of training to be provided by Course J3AZR75000 00X, Audiovisual Methods.

b. Provides the basis for the development of more detailed training materials and objectives and training evaluation instrument for the course.

2. Course Description. The course covered by this standard is designed to provide training for selected Air Force instructors, instructor supervisors, and training specialist in designing and developing audiovisual materials for Air Force training programs. The scope of training includes learning theories and the communication process, media selection and operational characteristics of audiovisual production and playback equipment, development of visual materials, writing principles for audiovisual packages, development of audio narratives, construction of audiovisual storyboard, and production of audiovisual lessons. Each student plans, develops, and produces an audiovisual lesson.

NOTE: Audiovisual lessons developed by ATC instructors will not be used in the classroom until appropriate service test approval has been obtained.

3. Qualitative Requirements. Attachment 1 contains the list of tasks, knowledges, and proficiency referenced in paragraph 1.

4. Recommendations. Comments and recommendations are invited concerning quality of ATC training and graduates, (AFR 50-38). Use this CTS as a reference and address correspondence to ATC/TT, Randolph AFB, Texas 78148

JOHN W. ROBERTS, General, USAF
Commander

D. S. WEARTH, Colonel, USAF
Director of Administration

1 Attachment
Qualitative Requirements

This supersedes CTS SH 52-3AZR75000-X, 11 Nov 1974
Sheppard OPR: Faculty Development Division
ATC OPR & Approval Date: TTSE, 24 May 1978
DISTRIBUTION: X (continued on page 2)

QUALITATIVE REQUIREMENTS

CTS 52-J3AZR75000 00X

PROFICIENCY CODE KEY		
	SCALE VALUE	DEFINITION: The Individual
TASK PERFORMANCE LEVELS	1	Can do simple parts of the task. Needs to be told or shown how to do most of the task. (EXTREMELY LIMITED)
	2	Can do most parts of the task. Needs help only on hardest parts. May not meet local demands for speed or accuracy. (PARTIALLY PROFICIENT)
	3	Can do all parts of the task. Needs only a spot check of completed work. Meets minimum local demands for speed and accuracy. (COMPETENT)
	4	Can do the complete task quickly and accurately. Can tell or show others how to do the task. (HIGHLY PROFICIENT)
*TASK KNOWLEDGE LEVELS	a	Can name parts, tools, and simple facts about the task. (NOMENCLATURE)
	b	Can determine step by step procedures for doing the task. (PROCEDURES)
	c	Can explain why and when the task must be done and why each step is needed. (OPERATING PRINCIPLES)
	d	Can predict, identify, and resolve problems about the task. (COMPLETE THEORY)
**SUBJECT KNOWLEDGE LEVELS	A	Can identify basic facts and terms about the subject. (FACTS)
	B	Can explain relationship of basic facts and state general principles about the subject. (PRINCIPLES)
	C	Can analyze facts and principles and draw conclusions about the subject. (ANALYSIS)
	D	Can evaluate conditions and make proper decisions about the subject. (EVALUATION)

– EXPLANATIONS –

* A task knowledge scale value may be used alone or with a task performance scale value to define a level of knowledge for a specific task. (Examples: b and 1b)

** A subject knowledge scale value is used alone to define a level of knowledge for a subject not directly related to any specific task, or for a subject common to several tasks.

– This mark is used alone instead of a scale value to show that no proficiency training is provided in the course, or that no proficiency is required at this skill level.

X This mark is used alone in course columns to show that training is not given due to limitations in resources.

DISTRIBUTION: (continued from Page 1) ATC-TTS-1; CCAF/AY-1; KTTC/TTGH-10; AFMTC/TTGH-10; LTTC/TTGH-10; CTTC/TTGH-10; Sheppard: TTGX-1; TTS-1; TTGH-50.

Attachment 1

Task, Knowledge, and Proficiency Level	
1. APPLY LEARNING THEORIES TO AUDIOVISUAL LESSONS	2b
2. APPLY AUDIOVISUAL COMMUNICATION CONCEPTS	2b
3. SELECT AUDIOVISUAL MEDIA (SOFTWARE AND HARDWARE)	2b
4. PREPARE VISUAL MATERIALS FOR INTEGRATION INTO AUDIOVISUAL PROGRAM PACKAGES	2b
5. DEVELOP STORYBOARD AND SCRIPT (NARRATIVE) FOR AUDIOVISUAL PRESENTATION	2c
6. UTILIZE AUDIO RECORDING TECHNIQUES	2c
7. DEVELOP AND PRODUCE AUDIOVISUAL LESSON INCORPORATING STUDENT RESPONSES	2c

3. FUTURE TRENDS

3.1. The ISD Managers, Technician and Mediated Materials Development courses are presently under revisions recommended by the using commands at training conferences conducted in July. The Managers Course will add material on how to determine whether an operational problem stems from training or some other category of management problem such as supervision and etc. The Technician Course will be modified to reduce "hands-on" slide-tape and programmed materials development. The ISD Step 4 block will increase instruction on constructing and analyzing decision trees and materials to determine the optimum cost effective mix of methods, materials and media versus externally imposed constraints and the variables inherent in the instructional situation. These variables will include, for example, a relative estimate of whether the subject material is stable or dynamic. Dynamic subject material is a significant factor in determining the amount of programmed materials. Can the student flow be predicted to the degree necessary to seriously consider, for example, peer instructional methods? The course will also increase the amount of time devoted to group interaction and discussion without destroying the basic self-paced design. The course will add the latest materials we can find and synthesize to address writing objectives and setting some standards to measure the deeper and more complex learning behaviors. The Mediated materials Development Course will be modified to permit open entry/exit. In this manner, students who proficiency advance to complete the Technician Course early may complete the "hands on" mediated materials development objectives being dropped from the Technicians Course in approximately the same amount of time originally scheduled for their curriculum developer training.

3.2. Centralized ISD Training

Future efforts toward more efficient military training systems will probably accelerate the present trend toward centralized ISD training. As the operational commands economize, more command conducted ISD training programs will be transferred to Air Training Command. Eventually, as the ISD process is better understood and expanded, the products of ISD may become more standardized.

3.3. Expanded Areas of ISD Application

History has demonstrated that the ISD process concept has been successfully applied for a number of years in the psyco-motor domain of learning and to a more limited extent in the cognitive domain. For manual task skills, objective and performance test items can usually be

established. However, examples of successful application of the ISD process concept is not so apparent when we move to more complex tasks like troubleshooting electronics equipment or when our training programs are directed toward behaviors assumed for the cognitive and affective domains of learning. Here, the relationship between objectives and behavior moves toward indirect relationships based on multiple inferences through a maize of non-standardized hierarcies of objectives that are at best difficult and time consuming to construct. With our state-of-the art methods, a direct link between deeper level objectives and an absolute kind of performance test is probably impossible. If not impossible, then certainly questionable in terms of developmental costs versus measurable increased training effectiveness. Therefore, the ISD process will either be expanded and modified until we find efficient means of application for more complex behaviors or develop new process concepts for training development for the deeper and more complex levels of learning.